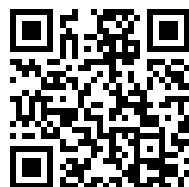
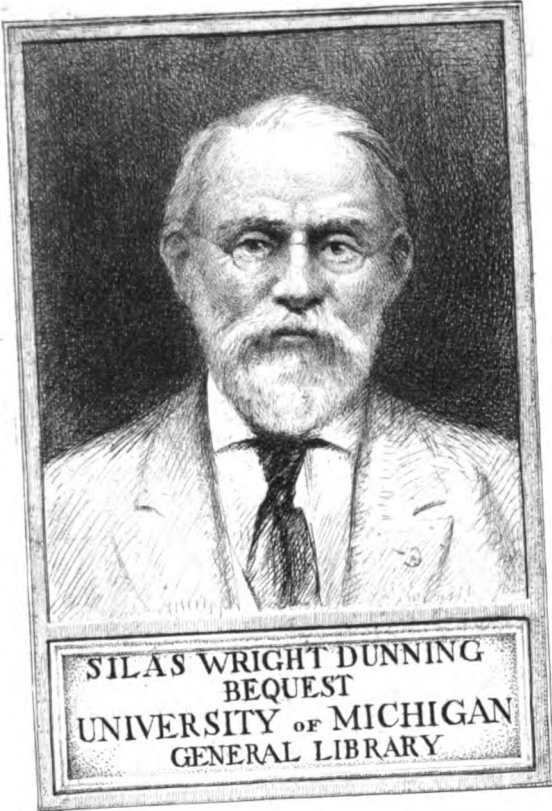

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12. The Impressions of a Company Commander during Brigade Training in Egypt, February 1925, by Captain R. J. Tuke.
13. Some More Early Articles of War, by Captain H. Bullock.

Military Notes.
Correspondence.
Reviews.

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Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., para. 204, and King's Regulations, para. 509.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

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United Service Institution of India.

JANUARY, 1928.

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I.—New Members.

The following new members joined the Institution from 1st September to 30th November 1927 :—

ORDINARY MEMBERS.

Lieut. A. H. G. Napier.	Captain M. L. Hayne.
Major-General W. H. Ogilvie.	Lieut. G. C. Stockwell.
Captain A. B. Ellis.	Lieut. A. T. M. E. Momber.
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Captain H. N. Smith.	Captain W. A. R. Ames.
Captain C. H. Price.	Captain J. LeC. Fowle.
Captain B. D. G. Bromhead.	Captain A. D. C. McAlister.
	Lieut.-Col. W. S. Beamish.

II.—Examinations.

(a) The following table shows the campaigns on which the military history papers will be set from March, 1928, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii) :—

Serial No.	1	2	3	4	5
		Date of examination.	Campaign set for the first time.	Campaign set for the second time.	Campaign set for the last time.
1	March, 1928 ..	Waterloo, 1815 (from the landing of Napoleon in France, 1st March, to the conclusion of operations at Waterloo).	..	Mesopotamia, 1916-17 (as detailed in Army Order 339 of 1925, as amended by Army Order 168 of 1926).	
2	October, 1928 ..	Palestine, 1917-18 (from Genl. Allenby's assumption of command, 28th June, 1917, to the conclusion of operations, 31st October, 1918), covered by despatches, dated 16th December, 1917, 18th September and 31st October, 1918, and 23th June, 1919.	Waterloo, 1815 (as given in Serial 1, column 3)	..	
3	March, 1929 ..	..	Palestine, 1917-18 (as given in serial 2, column 3).	Waterloo, 1815 (as given in serial 1, column 3).
4	October, 1929 ..	To be notified later.	..	Palestine, 1917-18 (as given in serial 2, column 3).	

NOTE.—With regard to Army Order 363 of 1926, the above campaigns will not be divided into general and special periods.

(b) Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1. *The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2. *The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. C. G. Powels).

B.—OTHER BOOKS.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The Revolt in the Desert (T. E. Lawrence).

Allenby's Final Triumph (W. T. Massey).

How Jerusalem was Won (W. T. Massey).

Outline of the Egyptian and Palestine Campaigns, 1914-18
(Bowman-Manifold).

L'Attaque du Canal de Suez (Douin).

Army Quarterly—October 1920 (T. E. Lawrence's article).

Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T. Atkinson's articles).

Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's article).

Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).

R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's article).

U. S. I. Journal—October 1923 (Captain Channer's article).

3.—*The Dardanelles Campaign.**Description.*

- | | |
|---|--|
| Naval and Military Despatches .. | A clear account of the operations in detail from the G. H. Q. standpoint. |
| Reports of the Dardanelles Commission. | Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts. |
| The Dardanelles (Callwell) .. | The best account and criticism of the strategic conduct of the campaign. |
| Gallipoli Diary (Sir I. Hamilton) .. | The campaign from the point of view of the C.-in-C. on the spot. |
| Life of Lord Kitchener (Arthur) .. | Throws considerable light on Lord Kitchener's direction of the campaign. |
| The Dardanelles Campaign }
(Nevinson.) | Well written and picturesque accounts by eye-witnesses. |
| Gallipoli (Masefield) | |
| The World Crisis (Winston Churchill.) | Explains his part in inception of the campaign. |

NOTE:—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson). From point of view of the
C. I. G. S.
Five years in Turkey (Liman Van Sanders).
Official Account: Official History of the War, Naval Operations, Vols. II and III.
Gallipoli Campaign (Outline of Military Operations). By a Student.
Experiences of a Dugout (Callwell).
Despatches from the Dardanelles (Ian Hamilton).
The Navy in the Dardanelles Campaign (Wemyss).

4.—*The Mesopotamia Campaign.*

- The Campaign in Mesopotamia, 1914-18 (Evans).
Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).
Critical Study of the Campaign in Mesopotamia up to April, 1917.
Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
The World Crisis (Winston Churchill).
Notes and Lectures on the Campaign in Mesopotamia (A. Kearsey).

5.—*Waterloo Campaign.*

- Waterloo Campaign (J. H. Anderson).
Waterloo (Hilaire Belloc).
Wellington and Waterloo (Arthur Griffiths).
Waterloo the Downfall of the first Napoleon (George Hooper).
Campaign of 1815 (W. H. James).
With Napoleon at Waterloo (E. B. Low).
Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).
Waterloo Campaign (S. C. Pratt).
Wellington and Waterloo (G. W. Redway).
Wellington Campaigns. Peninsula-Waterloo, 1808-1815, also Moore's.
Campaign of Corunna (C. W. Robinson).

6.—*The American Civil War.*

- Stonewall Jackson and the American Civil War (G. F. R. Henderson).
 History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).
 History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).
 American Civil War (J. H. Anderson).
 The 1st American Civil War, 1775-78 (Henry Belcher).
 The American Civil War, 1861-64 (John Formby).
 History of the American Civil War (J. W. Draper).
 Fredericksburg and Chancellorsville (J. E. Gough).
 Battles and Leaders of the Civil War (Johnson and Buel).
 War of Secession, 1861-62 (G. W. Redway).

7.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

8.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

- A Staff Officer's Scrapbook (Ian Hamilton).
 German Official Account.
 Lectures on the Strategy of the Russo-Japanese War (Bird).
 Question on the Russo-Japanese War (Brunker).
 Official Account : The Russo-Japanese War (Naval and Military), 3 Vols., published by Committee of Imperial Defence.
 Outline of the Russo-Japanese War (Ross).
 A Study of the Russo-Japanese War (Chasseur).
 My Experiences at Nan Shan and Port Arthur (Tretyakow).
 Outline History of the Russo-Japanese War, 1904, up to the Battle of Liao-Yang, with Questions and Answers (P. W.).
 A short account of the Russo-Japanese War ("Footslogger").
 An account of the Battle of Liao-Yang (with questions and 10 maps for examination purposes) (Bird).

9.—*Organization of Army since 1863.*A.—**ORGANIZATION OF ARMY SINCE 1863.**

- History of British Army, by Fortescue, Vols. I to XI.
 Outline of the Development of British Army, by Major-Genl. Sir W. H. Anderson.
 Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

* Notes on the land forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1925.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines, *viz.*, R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc.

10.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas, 1917).

The British Empire Series. (XII volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

Forty-one years in India (Lord Roberts).

History of the British Army (Sir John Fortescue).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominions in India (Sir A. C. Lyall, 1894).

A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).

* Particularly recommended by the C. I. G. S. for all officers to read.

- The Nearer East (Hogarth, 1902).
 Modern Egypt (Cromer, 1908).
 Egypt and the Army (Elgood, 1924).
 The History of Canada (W. L. Grant).
 Nova Scotia (B. Wilson, 1911).
 Report on British North America (Sir C. P. Lucas).
 The Union of South Africa (R. H. Brand, 1909).
 Short History of Australia (E. Scot).
 History of the Australasian Colonies (Jenks, 1912).
 The English in the West Indies (J. A. Froude, 1888).
 The Lost Possessions of England (W. F. Lord, 1896).
 International Relations of the Chinese Empire (H. B. Mosse).
 (Kelly and Walsh Shanghai).
 Whats wrong with China (Gilbert).
 Why China sees Red (Putman-Weale).

11.—*Military Geography.*

- Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).
 Imperial Military Geography (Capt. D. H. Cole, 1926).
 Introduction of Military Geography (Col. E. S. May).
 Imperial Defence (Col. E. S. May).
 Main Feature of the Japanese and other Pacific Problems.
 (Reprinted from *Morning Post*. Sifton Præd).
 Britain and the British Seas (H. J. Makinder, 1907).
 Military Geography (Macguire).
 Imperial Strategy (Repington).
 War and the Empire (H. Foster).
 Historical Geography of British Colonies (Dominions), 7 Vols.
 (Sir C. P. Lucas, 1906-17)—
 Vol. 1, Mediterranean.
 Vol. 2, West Indies.
 Vol. 3, West Africa.
 Vol. 4, South Africa.
 Vol. 5, Canada.
 Vol. 6, Australia.
 Vol. 7, India.
 The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

12. *Foreign Armies.***OFFICIAL.**

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- Handbook of the Polish Army, 1927.

13. *Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary tactics or the art of war, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

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9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps, and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is now available.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. India's Parliament, 1926, Vol. XIII.	1927	Official.
2. Regimental Standing Orders of the 11th P. A. V. O. Cavalry, F. Force.	1927	Col. C. B. Dashwood Strettell.
3. Great Captains Unveiled .. (Presented by Messrs. William Blackwood & Sons, London.)	1927	Capt. B. H. Liddell-Hart.
4. Linguistic Survey of India, Vol. I Part I. (Presented by the Government Central Publication Branch, Calcutta.)	1927	Sir G. W. Grierson.
5. Mechanization of War .. (Presented by Messrs. Sifton Praed & Co., London.)	1927	V. W. Germaines.
6. Where Cavalry Stands To-day .. (Presented by Messrs. Hugh Rees, Ltd., London.)	1927	Lt.-Col. H. V. S. Charrington.
7. The Punjab Administration Report 1925-26. (Presented by the Superintendent, Government Printing, Lahore.)	1927	....
8. The Dog in India .. (Presented by the Oxford University Press, Bombay.)	1927	Alston.
9. History of the 2nd Lancers .. (Gardner's Horse) 1809 to 1922.	1927	Captain D. E. Whitworth.

BOOKS PURCHASED.

	<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1.	Mother India	.. 1927	Katherine Mayo.
2.	Isles of Fear	.. 1925	
3.	Military Organization and Administration, 6th edition.	1927	Lt.-Col. W. G. Lindsell.
4.	Military Operations, France and Belgium, 1915, Vol. III.	1927	Brig.-General J. E. Edmonds.
5.	The Great Pyramid	.. 1926	D. Davidson and H. Alder Smith.
6.	The Indecisiveness of Modern War and other Essays.	1927	J. Holland Rose.
7.	Field Marshal Sir Henry Wilson's Life and Diaries.	..	Major-General Sir C. E. Callwell.

BOOKS ON ORDER.

1.	Army and Sea Power	..	Majors Eady and Pargiter.
2.	Soviet Versus Civilization	..	Augur.
3.	Growth of the Army and the Empire..		Gray.
4.	Bolshevist Russia	..	Karlsgren.
5.	China in Turmoil	..	King.
6.	Napoleon's Campaign in Italy	..	Burton.
7.	The Dardanelles Campaign	..	Nevison.
8.	Gallipoli	..	Masefield.
9.	Chemical Warfare	..	Frier and West.
10.	Revolt in the Desert	..	T. E. Lawrence.
11.	Five Years in Turkey	..	Liman Van Sanders.
12.	The Two Battles of the Marne	..	Marshals Joffre, Foch, and Ludendorf.
13.	Baghdad and the Story of its Last Fall.		Captain M. Amir Bey.
14.	The Garden of Adonis	..	Al. Carthill.
15.	Napoleon	..	Emil Ludwig.
16.	International Relations of the Chinese Empire.		H. B. Mosse.
17.	What's Wrong with China	..	Rodney Gilbert.
18.	Why China Sees Red	..	Putman Weale.
19.	The Staff and the Staff College	..	Maj. A. R. Godwin Austin.
20.	Memoirs of the last Phases of the Great War.		Prince Max of Baden.
21.	Moltke	..	Lt.-Colonel F. E. Whitton.
22.	Pegasus	..	Col. J. F. C. Fuller.
23.	The Truth about Jutland	..	Admiral Harper.
24.	On Economics	..	A. G. Chapman.
25.	The Money Market	..	Hartley Withers.
26.	War Birds	..	An Unknown Aviator.
27.	Commercial Air Transport	..	Lt.-Col. Ivo Edwards and F. Tymms.

IX.—Pamphlets.

The following may be obtained by V.-P. P., plus postage, on application to the Secretary :—

- (a) British and Indian Road Space Tables (separately). As. 12 each.
- (b) Diagram of Ammunition Supply (India). As. 4.
- (c) Diagram showing new system of maintenance in the field at Home. As. 8.
- (d) Military Law Paper, questions and answers. As. 4. (As used at the A. H. Q. Staff College Course, 1926).

X.—Schemes.

The schemes in the Institution have been considerably increased and in order to simplify their issue they have been classified and numbered as follows :—

They can all be obtained by V.-P. P. plus postage, on application to the Secretary.

- (A) *Administrative Exercise* (with diagram) .. Rs. 2.

To illustrate the supply system of a Division.
Suitable for Staff College or promotion.

- (B) *Mountain Warfare* Rs. 5 each.

- (i) Three lectures on Mountain Warfare.
- (ii) A scheme complete with Map and Solution.

- (C) *New Staff College Series* (1926) Rs. 5 each.

Each of these schemes is complete with map, solution and reasons. Each scheme contains three situations.

- (i) Approach March.
Reconnaissance of night attack.
Orders for night attack.
- (ii) Outposts.
Defence.
Action of a Force retiring.
- (iii) Move by M. T.
Occupation of a defensive position.
Counter-attack.
- (iv) Tactical Exercise without troops.
Reconnaissance for attack.
Attack orders.

(D) *Promotion Series* Rs. 5 each.

Each of these schemes is complete with map and solution.

Lieutenant to Captain—

(i) Mountain Warfare.

(ii) Defence.

Attack orders.

Captain to Major—

(i) Outpost.

Defensive position.

Withdrawal.

(ii) Tactical Exercise without troops.

Reconnaissance.

Attack orders.

(E) *Staff College Course Schemes (1926).*

(i) A set of three schemes, as given at the A. H. Q. Staff College Course, 1926, complete with map and solutions. *Complete set Rs. 6.*

A limited number of the following papers are available :—

(ii) Tactical Exercise without troops (with map and solution) Rs. 3-8.

(iii) Outpost problem (with map and solution) .. Rs. 3.

(iv) Rearguard scheme (with map and solution) .. Rs. 3.

(F) *Staff College Course Schemes (1927).*

(i) A set of the schemes, as given at the A. H. Q. Staff College Course, 1927, complete with map and solutions, complete set Rs. 9.

A limited number of the following papers are available :—

(ii) Organization and Administration—Peace (with notes for replies) As. 12 each.

(iii) A lecture on R. A. F. Co-operation with the Army " 8 "

(iv) A lecture on Cavalry " 8 "

(v) A lecture on Supplies in War " 8 "

(vi) A lecture on Tanks and Armoured Cars " 8 "

(vii) A lecture on Organization of the Indian Army " 8 "

(viii) A lecture on Medical Organization in Peace " 8 "

(G) Copies of the recent (February 1927) Staff College Examination papers are available :—

Training for war papers (with maps)	..	..	Rs. 3 each.
Other papers	..	..	Re. 1 ..

(H) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War" .. As. 12 each.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

XI.—Gold Medal Prize Essay Competition, 1928.

The Council has chosen the following subjects for the Gold Medal Essay for 1928 :—

- (i) In view of the number of weapons which the Indian soldier has to be taught in the short period of his colour service, how do you consider that our existing system of training could be simplified so as to retain what is essential to his efficiency and cut out everything which is unnecessary
or
- (ii) The stopping power of modern small arms weapons, combined with the increasing difficulty of obtaining draught animals are leading to progressive mechanisation in the Army at Home.

Bearing in mind the tasks the Army in India may have to carry out in war, both in the defence of her frontiers, internal security, and the possible provision of an expeditionary force for service in an Eastern theatre, consider the necessity for increased mechanisation of the Army in

India and suggest the directions in which it can most profitably be employed with due regard to economy.

The following are the conditions of the competition :—

1. The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army and Royal Air Force or Auxiliary Forces, who are members of the U. S. I. of India.
2. Essays must be printed or type-written and submitted in triplicate.
3. When a reference is made to any work, the title of such work is to be quoted.
4. Essays are to be strictly anonymous. Each must have a motto and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.
5. Essays will not be accepted unless received by the Secretary on or before the 30th June 1928.
6. Essays will be submitted for adjudication to the three Judges chosen by the Council. The Judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution of the medal. The decisions of the three Judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.
7. The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1928.
8. All essays submitted are to become the property of the United Service Institution of India absolutely and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
9. Essays should not exceed 15 pages of the size and style of the Journal exclusive of any appendices, tables or maps.

SIMLA,	}	By order of the Council,
1st January 1928.		J. G. SMYTH, MAJOR,
		<i>Secretary, United Service Institution of India.</i>

Prize Essay Gold Medallists.*(With rank of Officers at the date of the Essay.)*

- 1872..ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
 1873..COLQUHOUN, Capt. J. S., R.A.
 1874..COLQUHOUN, Capt. J. S., R.A.
 1879..ST. JOHN, Maj. O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., s.c.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry.
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
 1899..NEVILLE, Col. J. P. C., s.c.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905..COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., R.A.
 1909..MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
 1911..MR. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q.V.O., Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., M.C., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923..KEEN, Colonel F. S., D.S.O., I.A.
 1926..DENNY, Major L. E., M.C., 4/12th Frontier Force Regiment.
 1927..HOGG, Major D. Mc. A., M.C., R.E.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M.S., v.C., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* *N. B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894...O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909..MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(*concl'd.*).

- 1910..SYKES, Maj. M., c.m.g., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911..LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..PRITCHARD, Capt. P. P. A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..BAILEY, Capt. F. M., i.a. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917..MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918..NOEL, Capt. E. W. C. (Political Department).
- 1919..KEELING, Lt.-Col. E. H., m.c., R.E.
ALLA SA, Jemadar, N.-E. Frontier Corps.
- 1920..BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Qm. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..HOLT, Major A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..ABDUL SAMAD SHAH, Capt., o.b.e., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department.
- 1924..HAVILDAR RAHMAT SHAH, N.-W. F. Corps.
NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..SPEAR, Captain C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..HARVEY-KELLY, Major C. H. G. H., d.s.o., 4/10th Baluch Regiment.
- 1927..LAKE, Major M. C., 4/4th Bombay Grenadiers.

The Journal

OF THE

United Service Institution of India.

Vol. LVIII. JANUARY, 1928. No. 250.

EDITORIAL.

The year 1927 has been a definite step forward in what may be termed the "modernising" of the British Army.

The first few years immediately following the Great War were spent in bringing the personnel of the post-war army up to something approaching the standard of our expeditionary force of 1914 and in consolidating that high standard of discipline and individual training which was so marked a feature of our small pre-war army.

At one time we seemed in danger of forgetting the lessons of the Great War, some of which had not been fully brought out before the armistice, but others of which, such as the stopping power of machine guns in defence, had impressed themselves indelibly on every soldier. Had the armistice not come in 1918, and had the proposed 1919 programme of mechanisation and gas been put into force, we should have much more to go on in the reorganization of our army and should have been spared much experimentation, alteration and expense.

The different types of terrain over which the British Army might have to operate in defence of the Empire, and financial stringency, which made it essential that no definite step into mechanisation should be made without thorough test and trial, both tended to hinder progress in modernising the army.

The six-wheeler lorry goes far to solve the difficulty of producing a cross-country machine, which will not be too expensive to run and may also be suitable for civil use—this is most necessary for an army such as ours which has to expand so largely and so rapidly in war—and considerable progress has been made in mechanisation

generally. The establishment of an experimental mechanised brigade at Tidworth has provided many valuable lessons, both tactical and administrative, in the use of a completely mechanised force.

A number of officers on leave from India were given the opportunity of visiting the brigade, besides witnessing other demonstrations at the artillery and anti-gas schools.

The power of the machine gun in defence has been recognised by the increase of the number of machine guns with infantry battalions from 8 to 12 and a further increase is likely up to 16.

The operations of the mechanised brigade at Tidworth, in manœuvres with other troops, have resulted in still further clamours from the unprotected infantry for an infantry anti-tank weapon, the necessity for which has been put forward before in this Journal. This must come in time and the question will then be what weapon to cut out from the over-weaponed infantryman.

The obvious weapon to discard appears to be the Lewis Gun, and this would really suit Indian conditions, as the Lewis Gun has never been a satisfactory weapon for mountain warfare, where the provision of a sufficient number of rifles is always the difficulty. The introduction of a suitable automatic rifle would solve the problem at once but no satisfactory weapon of this nature has as yet been produced.

Air manœuvres have been held in England in 1927 for the first time and a short note about them appeared in the last Editorial. Here our experience of the last war is apt to be a little misleading as anti-aircraft gunnery has made great strides during the last few years, but it is a form of shooting which is difficult to test accurately in peace time.

We are likely, in the coming year, to see a further advance in the "modernising" of the army at Home and to get a more exact knowledge of the difficult administrative problems inseparable from the movement of a mechanised force a long distance from its base of supply.

* * * * *

Great importance is now attached to the periodical attachment of officers of one arm of the service to other arms. The value of these attachments is not so much to get technical knowledge or detailed information of the other arms but to get an understanding of the

other fellow's point of view, his capabilities and his limitations and difficulties. F. S. R. Vol. II has now been amended to read "The proper co-operation of all arms wins battles and enables the infantry to confirm the victory" and, in order to ensure this all-essential co-operation, a sympathetic knowledge and understanding of the other arms is necessary.

A writer in the *Journal of the Royal Artillery*, July 1927, rightly defines the rôle of artillery as being to assist the other arms in breaking down opposition and to afford them all possible support, but later on, when discussing the employment of artillery in anti-tank duties, he takes a curiously parochial view of this important problem. He states: "It is neither possible nor necessary to protect the foremost troops against tanks. The danger in a tank attack lies either in the fact that it is accompanied by an infantry attack or in the fact that, if tanks can penetrate the forward zone, they may create havoc among the headquarters, transport columns, billets, etc., in rear."

But what about the unfortunate infantry in the forward zone who are to be crushed without the opportunity of putting up any defence?

What infantry in the world will remain there a second time after having had the experience once? It is cold comfort for the infantry in the line to be told that they may rest assured that, in the event of a tank attack against them, the gunners will guarantee that the hostile tanks will be knocked out before they get to Divisional headquarters!

If tanks are going to play the big rôle which seems probable in future wars, it is absolutely essential that the infantry shall have an anti-tank gun or machine gun which will effectively stop a tank, otherwise the morale of the infantry will diminish rapidly.

A certain school of infantryman, now decreasing in numbers, may groan at the prospect of yet another weapon being thrust upon the already overloaded C. O. but, surely, the first question we must ask ourselves is—what is our enemy armed with? What have we got to stop? And if the answer is "Tanks," then it will avail little to be able to cover the countryside with a stream of '303 bullets and we should do better to reduce one of the existing weapons to make room for a "tank-stopper".

It has been announced in the press that the Air Ministry will no longer allow serving R. A. F. pilots to take part in the Schneider Cup. This has come as a surprise, just after England has won the trophy from Italy with a machine piloted by a R. A. F. officer, and the decision has aroused a good deal of controversy and antagonistic criticism. Most people will, however, consider that this decision is a very sound one and that the participation of serving officers, backed by Government material and money, in international competitions of this nature, should not be encouraged.

The participation of serving soldiers, wearing uniform, in cinematograph films has also come in for a good deal of criticism, though, in this case, they are being used to reconstruct something of historical value.

* * * * * * *

For the 1928 Staff College examination, competition in India is even keener than it was last year.

For the 6 competitive vacancies for Indian Army officers at Camberley there are 107 competitors as against 85 last year and for the 18 competitive vacancies at Quetta there are 153 competitors as against 139 last year.

The competitors for Quetta this year are made up as follows :—

<i>Branch of the Service.</i>			<i>Numbers.</i>	<i>Competitive vacancies.</i>
R. E.	..	..	3	1
R. A.	..	..	8	2
British Service (other arms)	..		24	15
Indian Army	..		118	

It will thus be seen that the proportion of vacancies to candidates are—

<i>Quetta</i>	..	R. E.	1 to 3
		R. A.	1 to 4
		Other arms	1 to 9
<i>Camberley</i>	..	Indian Army	1 to 18

For an Indian Army officer to get into Quetta this year, the competition is only half as severe as it is for Camberley, but this does not necessarily mean that it will be more difficult to pass into Camberley than in to Quetta ; this depends on the standard of marks gained by the top competitors at each college.

It is remarkable that the competition for R. E. and R. A. at Quetta is so small : this is probably the result of the introduction of open competition for all arms of the British Service for Camberley.

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Another " Backward Boys " class will be held in Simla this year from about July 15th to August 15th.

INNERMOST ASIA AND THE STORY OF CHINA'S CENTRAL-ASIAN EXPANSION.

BY

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When some months ago Sir Denys Bray conveyed to me your Council's kind invitation to lecture before you I felt that I owed this distinction mainly to the fortunate fact of my having been able to pursue my life's work as an antiquarian and geographical student far more in the field than in the study and the learned atmosphere of Museums. I have indeed much reason to feel grateful to Fate—and to those who officially dispense it in this country, for having enabled me ever since I first landed in India just forty years ago, to do the work I most care for near to the N.-W. Frontier; for cherished interests had attached me to it and to the great Central-Asian regions beyond already during the academic years I spent as a young Orientalist student in Europe.

So when I was placed before the choice of a subject suited for a lecture before your Institution, my thoughts were bound by this personal reason to turn to that ground on or beyond the N.-W. Frontier which must claim primary importance for all who are called upon to face the problems of India's defence from invasion.

Within the limits of this common sphere of interests—if I may thus venture to call it,—there still remained a wide choice for a subject. I might well have felt tempted to seek it on one of the stretches of the actual border, so fascinating and so varied. On different tours of exploration I had enjoyed the chance of becoming acquainted with them, from the snowy heights of Hindukush down to the Perso-Afghan border in Sistan. But then I remembered that to tell something that could possibly present some novel interest to an audience comprising so many Frontier experts would require far more preparation than my tasks would allow me to find time for at present. Also the aggregate of the periods I had ever been able to spend on the Frontier in full freedom for congenial work was far less than the happy years of travel which I was privileged on three long expeditions undertaken under the Government of India's auspices to devote to explorations in the great Central-Asian regions beyond.

So instead I propose to ask you this evening to accompany me on a rapid survey of those vast passage lands of innermost Asia which extend to the north of the Hindukush and the Tibetan plateaus. Barren wastes as they are for the most part, they had seen pass by some of the most notable races which, pushing in turn south-westwards, conquered and ruled both the Frontier and the great plains of Northern India. The historical past of innermost Asia, when viewed with the help of the records and remains brought to light in the course of my explorations, may teach some lessons not altogether without interest for those who have to keep watch and ward against similar conquests in the future.

That region may be roughly described as comprising those vast basins, elevated and drainageless, which extend from east to west almost half-way across the central belt of Asia. Their longitudinal rim is well defined by the big rampart of the T'ien-shan, the "Celestial mountains", in the north and the snowy K'un-lun ranges in the south which divide those basins from Tibet. The eastern border of the region may be placed on the watershed towards the drainage area of the Pacific Ocean. In the west it abuts on the mighty mountain mass of the Pâmirs which gives rise to the head-waters of the Oxus.

If you look at the map it might well seem as if this vast region had been intended by nature far more to serve as a barrier between the lands which have given to our globe its great civilizations than to facilitate the exchange of their influences. For within this area measuring some 1,600 miles in a direct line from east to west and over 600 miles from north to south, the ground capable of settled life is strictly limited to strings of oases, all with a few exceptions comparatively small. The rest is occupied by huge stretches of desert.

It is this extreme deficiency of water which invests by far the greatest portion of the area with the character of what I may call "true desert". Let me lay stress on the word "true" in order to make it quite clear that this ground differs greatly indeed from those deserts with which biblical stories, descriptions of Arabian, Persian or South African scenery and the like have made many of us familiar. These "tame deserts" may indeed impress the town dweller in Europe with their sense of solitude, emptiness and—let me add, peace. But deserts in which nomadic tribes can wander about for long periods are not such as face us in most parts of the huge basin between the Celestial Mountains and the K'un-lun.

By far the greater part of this basin is filled by the dune-covered Taklamakān and the wastes of hard salt crust or wind-eroded clay of the Lop Desert which stretch almost unbroken for a total length of over 900 miles from west to east. In them the absence of moisture bans not only human existence but practically also all animal and plant life. Conditions are almost as forbidding in the high mountains and plateaus of the K'un-lun. There vegetation is to be found only at great elevations where the proximity of glaciers provides moisture, or else in the extremely confined space which the streams fed by those glaciers leave at the bottom of deep-cut narrow gorges.

It will be best to start our rapid survey from the mountain barrier on the west, because it was from that side that the earliest influences of the classical world, of India and of Persia passed into innermost Asia and thence into China. I mean the great meridional range conveniently known as that of Muztāgh-atā, the *Imaos* of the ancients, which joins the T'ien-shan on the north to the ice-clad Hindukush on the south. On this range lies the watershed between the drainage areas of the Oxus and the Tārīm rivers. But the line of greatest elevations, rising well over 25,000 feet, stretches to the east of the watershed.

To the high plateau-like valleys of the Pāmīrs it is not necessary to make more than passing reference; for those bleak uplands do not properly fall within the limits of the region which concerns us here. But I may just mention the two important lines of communication which lead through or past the Pāmīrs and in ancient times served as arteries for trade and cultural relations linking the Tārīm basin with flourishing territories on the middle Oxus. The one on the south leads from Badakhshān up the open valley of Wakhān to the head of the true feeder of the Oxus and thence to Sarīkol and Yārkand. The other started from ancient Bactra, the present Balkh, and ascending the great Pāmīr-like valley of the Alai led across a saddle of the Muztāgh-atā range to Kāshgar. It was by this route that the caravans of classical times carried the silk of the Seres, *i.e.*, of the Chinese to the Oxus and thence to Syria and the Mediterranean.

Descending eastwards from the Pāmīrs we reach through tortuous gorges the western margin of the huge trough, appropriately known as the Tārīm basin. Before we proceed to visit it, we may pass in rapid strides along the big mountain chains enclosing this basin;

for were it not for the water which their glaciers send down into it, the whole of this vast area would be barred to life.

On the southern flank of the basin there extends in an unbroken line the mighty mountain rampart of the K'un-lun. Starting from the side of the Pāmirs we find its ranges buttressing the great glacier-clad watershed towards the Indus which the Kara-koram pass from Ladāk crosses at an elevation of some 18,600 feet above sea level.

Further to the east the K'un-lun raises a practically impenetrable barrier to traffic of any sort. The two rivers watering the Khotan oasis, the Kara-kāsh and Yurung-kāsh, break indeed through the northernmost main range. But their passage lies largely in extremely deep-cut and for the most part quite inaccessible gorges. Quite as great a barrier is represented by the utter want of resources on the drainageless Tibetan plateaus, 15,000 to 16,000 feet in height on the average, which adjoin and extend for many marches to the south.

Very different in character and yet almost as forbidding and barren, is the aspect which the outer slopes of the K'un-lun present above the Khotan section of the basin. Here we find areas where a perfect maze of steeply serrated ridges and deep-cut gorges has been produced by erosion. It can only be due to prolonged water action. Yet only on rare occasions do these barren slopes, unprotected by vegetation, receive any heavy rain or snowfall. Throughout the whole length of the chain the foot of its northern slopes is formed by a glaciis of piedmont gravel, attaining in parts a width of 40 miles and more, and everywhere utterly barren.

Beyond the eastern extremity of the Tārīm basin the K'un-lun imperceptibly merges in the Nan-shan, the "Southern Mountains" of the Chinese. There, favoured by the moisture which air currents from the Pacific Ocean carry up, abundant vegetation clothes the valleys. To eyes accustomed to the barrenness of the K'un-lun it is an impressive experience to see the excellent summer grazing offered by the open valleys at the head-waters of the Su-chou and Kan-chou rivers notwithstanding the great elevation, about 12,000 feet. Still further to the south-east increasing snow and rainfall permits of plentiful forest growth in the valleys drained by the Kan-chou river.

From here near the watershed of the Pacific we must turn back in order to complete our circuit of the mountains. Westwards the lower course of the Kan-chou river there extend the barren hill

ranges and plateaus of the Pei-shan (the "Northern Mountains"). Beyond the Su-lo-ho basin this merges in the equally arid hill chains known by the Turkī name of Kuruk-tāgh, the "Dry Mountains". Neither nomadic occupation nor large migrations were ever possible here during historical times. Violent winds, mainly from the north-east and icy even late in the spring, blow across this whole region at frequent intervals and cause its crossing to be dreaded by way-farers.

To the east of the Hāmi oasis there starts the great mountain chain of the T'ien-shan. It everywhere constitutes a strongly marked dividing line between the Tārim basin and the regions adjoining northward. These comprise the wide plateaus of Dzungaria, stretching as far as the Altai mountains and southernmost Siberia, as well as great fertile valleys. Owing to a distinctly moister climate grazing is to be found there both in plains and valleys, and this has at all times attracted waves of nomadic nations, from the Huns to the Turks and Mongols.

From the mountain barriers which enclose the Tārim basin we may now turn to a summary survey of the basin itself. Of its vast dimension an adequate idea may be gained from that fact that from west to east it stretches over a direct distance of some 900 miles. By far the greatest zone in the basin comprises the huge central desert of bare sand dunes which is popularly known as the "Taklamakān."

Not one of the numerous rivers descending from the snowy K'un-lun succeeds in making its way through the Taklamakān, except the Khotan river and that, too, only during a few summer months. All the rest are lost in this "sea of sand". But within historical times a number of these terminal river courses carried their water considerably further north. This is conclusively proved by the ancient sites which I explored in the Taklamakān.

These explorations have familiarized me with the uniformity prevailing in the character of this huge desert, probably the most formidable of all the dune-covered wastes of this globe. Wherever the traveller enters it, he first passes through a sandy zone with desert vegetation. A very peculiar and interesting feature of this zone consists of "tamarisk-cones," hillocks of conical form and often closely packed together. The slow but constant accumulation of drift sand around tamarisk growth, at first quite low, has in the

course of centuries built them up to heights reaching fifty feet or more. Further out in the Taklamakān there emerge from the dunes only shrivelled and bleached trunks of trees, dead since ages. These, too, finally disappear among utterly bare accumulations of sand, in places heaped up into ridges rising to 300 feet or more.

It is erosion by the winds which produces the fine dust of disintegrated less composing these dunes. The scouring effects of wind erosion are most strikingly displayed in the endless succession of parallel furrows and ridges, which cover a great portion of the dismal dead delta by the western shores of the dried-up Lop sea.

Here and at all ancient sites in the Taklamakān the ruins of dwellings or even the remains of ancient orchards and arbours, invariably occupy island-like terraces rising high above the wind-eroded bare ground close by. The debris of walls or the fallen trunks of trees had here protected the soil from erosion and thus preserved the original level, while the ground around was being scooped out lower and lower. As a result of this erosive action of the winds neolithic stone implements and other hard relics of prehistoric times could be picked up by me on the surface, in places side by side with remains of about the time of Christ.

The possibility of permanent occupation within the Tārīm basin is confined to the small zone of oases between the Taklamakān and the encircling mountain ranges. Owing to extreme aridity cultivation is wholly dependent on canal irrigation. The same deficiency of atmospheric moisture restricts grazing to the narrow belts of riverine jungle. This explains why the great migrating tribes of Wu-sun, Sakas, Yüeh-chih, Huns, Turks, Mongols and the rest, who during the last two thousand years successively passed along the northern slopes of the T'ien-shan, several of them making their power felt in India at the end, were always ready to raid or to make tributary the oases of the Tārīm basin but never crossed the range permanently to occupy it. As the map shows, those oases appear like mere dark specks and splashes on the big canvas of yellow and light brown which marks the desert.

The terminal depression of Lop at the eastern end of the Tārīm basin is the smallest and certainly the most desolate among its natural divisions. The whole of it is now uninhabited, except for three little oases at the foot of the K'un-lun glacis.

The central and geographically most striking feature of this region is the great salt-encrusted sea bed. It marks the position of a prehistoric salt sea which was fed by the drainage of the Tārīm basin, when the climate of Central Asia was moister. In the now equally lifeless ground which adjoins this dried-up sea on the north-west there can still be traced a series of well marked dry river beds. Our surveys have proved that they belong to an ancient delta formed by the dried-up "Kuruk-daryā" and in places once occupied by small settlements of ancient *Lou-lan*.

Through this once habitable ground there had passed the earliest Chinese route leading from the Su-lo-ho trough into the Tārīm basin. The ancient Chinese route crossed the salt-encrusted sea bed east of Lou-lan and then turned up a valley-like depression extending to the north-east. This takes us across a dry lake bed, surrounded by a maze of fantastically eroded clay terraces, directly into the lowest portion of the basin of the Su-lo-ho river.

Uninhabited except for the oasis of Tun-huang and for a few minor settlements, this basin derives its importance solely from the fact that it forms a natural and easily defended "corridor" leading from north-western China into Central Asia.

As we descend from the Nan-shan in valleys which moisture derived from the Pacific has clothed with plentiful vegetation, we come to a broad belt of well-cultivated alluvial fans stretching along the foot of the range at an elevation from 5,000 to 6,000 feet. This belt was destined in history to become a very important "land of passage" between China and Central Asia.

We have now completed our survey of the vast region which for close on a thousand years had served as the principal scene for that important historical process, the early interpenetration of Far Eastern, Indian and Western civilizations.

The story may be said to start with the adventurous Central-Asian mission of Chang Ch'ien. The great Emperor Wu-ti of the former Han dynasty, about 138 B. C. dispatched that young officer to the tribe of the great Yüeh-chih who later became the Indo-Scythian rulers of north-western India. The object was to gain their aid against those hereditary foes of China, the Hsiung-nu, destined to figure later as the Huns in European and Indian history. The Yüeh-chih whom they had ousted some twenty years earlier from their old seats along the

northern foot of the Nan-shan, had migrated far away to the west and established a new kingdom on the Oxus. When Chang Ch'ien after many trials and difficulties at last reached the Yüeh-chih, these refused to turn back and seek revenge on the Huns. So the mission entrusted to Chang Ch'ien failed in its direct aim. All the same it was destined to open a new epoch in the economical and political relations of China with the world outside its own civilization.

Chang Ch'ien, after a total absence of thirteen years, succeeded in regaining China by way of the Tārīm basin, with only *one* companion surviving out of the hundred with whom he had started. He brought back definite information about the Central-Asian countries he had passed through. It was he who first revealed to the Chinese the existence of great civilized populations beyond the ring of barbarous tribes by whom all their land frontiers were hemmed in. The great importance of securing access to the former for the sake of trade and military aid quickly led to a policy of expansion.

The avowed aim of this policy was to open the road to the large and flourishing territories in the Oxus region, including Bactria or Balkh and what are now Bukhāra, Samarkand and Farghāna. The Huns' hold on the northern slopes of the Nan-shan blocked nature's true highway towards the Tārīm basin and the Oxus region beyond. So the Chinese effort was turned against them. And here the fortune of war soon rewarded the Emperor Wu-ti's persistent endeavours. By 121 B. C. the Huns were finally forced to retreat to the north of the desert.

The military advance along the great highway towards Central Asia was accompanied by a rapid organization of Chinese political missions to the different states both within the Tārīm basin and beyond. Among the Chinese industrial products carried by these missions there prominently figured those fine silk stuffs which then began to reach the Mediterranean through Parthia and Syria. They soon carried the fame of the "silk-weaving Seres," *i.e.* of the Chinese, to the great centres of Greek and Roman civilization.

The great westward move initiated by the Emperor Wu-ti was directed quite as much by political reasons as by economic considerations connected with trade. Before long Chinese missions on their way through the Tārīm basin experienced serious trouble from the chiefs and inhabitants of petty territories which cut off their food supplies, obviously with a view to blackmail, or directly attacked them.

So the need for military protection beyond the newly conquered territory along the northern foot of the Nan-shan very soon asserted itself. Nor did it find the Chinese unprepared. Immediately after the first conquest of that great natural "corridor" they had started the establishment of military colonies along it and the construction of a wall extending to the west. This was obviously connected with the defensive border line of the 'Great Wall' which Shih Huang-ti, the predecessor of the Han dynasty, had created for protection against Hun inroads.

There can be no doubt that this western extension of the "Great Wall" was primarily intended to protect the newly opened highway into Central Asia. It was not intended for passive defence like the familiar "Chinese Wall" of mediæval times. On the contrary, the Emperor Wu-ti's wall was distinctly meant to serve as the instrument of a "forward policy", conceived on a big scale. The analogy it thus offers to the earlier *Limes* systems of the Roman Empire is very striking; for modern antiquarian researches have proved that the lines of the Roman *Limes* were originally integral portions of the great strategic road system of the Empire.

And in passing I may here mention that these Roman *Limes* lines have their exact modern counterpart on our N.-W. Frontier, in the great protected road system now securing British hold on Waziristan. Last cold weather I had the good fortune to find myself there on a true *Limes* "in being".

On my second and third Central-Asian expeditions I was able to trace and explore the remains of that ancient Chinese *Limes*, the earliest of all, from its westernmost end in the terminal basin of the Su-lo-ho right through to the Etsin-gol river, over a total distance of not far from 400 miles, almost all through true desert.

Events moved rapidly enough. As so often in history, the aims of peaceful penetration in the interest of trade and civilized intercourse called before long for support by political influence and military action. It was the not unusual case of the flag having to protect the trade. From the outset the Chinese policy of Central-Asian expansion appears to have fixed its hopes for profitable trade upon the large and fertile territories in Western Turkestan. But the distances separating those western territories of Central-Asia from China were vast. Relying upon the protection thus afforded, the people of Farghāna in the end robbed and killed some imperial envoys.

Chinese prestige required prompt punishment of such an offence. So a punitive expedition was dispatched in 104 B. C. against Farghāna. It ended in complete failure. The large force sent became exhausted by the difficulties of the route followed across the dried-up salt sea bed of Lop, and by the want of supplies beyond, long before its remnant reached Farghāna. There it was utterly routed while besieging a town. When in its retreat it regained Tun-huang "only one or two," we are told, "out of every ten soldiers were left."

To repair so signal a defeat all the resources of the empire were strained. By 102 B. C. the Chinese general Li Kuang-li was enabled to set out once more from Tun-huang with a fresh army of sixty thousand men, supported by a huge commissariat. This time the Chinese power of intelligent organization of supply and transport triumphed over all the difficulties of nature. The force of thirty thousand men with which the Chinese general reached the capital of Farghāna sufficed to secure victory and the submission of its people.

The prestige of China was so strengthened by this great feat that all the small states of the Tārīm basin accepted imperial sovereignty. Effective measures were taken to safeguard henceforth the road westwards from Tun-huang by military stations; further west along the main trade route of the Tārīm basin Chinese soldiers were settled as agricultural colonists.

Henceforth Chinese control of the Tārīm basin, remained practically unbroken for more than a century. Geography seems to have singularly prepared the Tārīm basin for its chief historical role. It was to serve as the channel through which the ancient civilizations of China on the one side and of Persia and India on the other, were first brought into prolonged contact. Nature by denying grazing grounds to the vast basin between K'un-lun and T'ien-shan had protected its oases against ever becoming the scene of great migratory movements and of such upheavels as are bound to occupy them.

It is necessary to keep well in view the exceptional importance and advantages which the Tārīm basin possessed for the Chinese as a safe line of passage for trade and political expansion westwards, if we are to understand the reasons which induced them to face and overcome the forbidding natural difficulties besetting access to it. The explorations carried on during my winter campaigns of 1907 and 1914 enabled me to trace the route used for Wu-ti's enterprises over the formidable wastes of sand, bare gravel and salt which it crossed.

Let us start from the side of China and its north-western marches in the great province of Kan-su. We have already seen that the submontane belt on the northern slopes of the Nan-shan provided a great natural corridor westwards. Abundantly watered it could as far as Su-chou furnish produce amply sufficient for the needs of any number of men and animals that trade or military movements might bring along it.

The oasis of Tun-huang was then as now the last locality capable of cultivation. West of Tun-huang down to the terminal marshes of the Su-lo-ho there extends a bare gravel desert. Desolate as this ground is, it is here that my explorations have revealed the most striking evidence of the thoroughness with which Chinese power of systematic organization had prepared for the safe use of the difficult route into the Tārīm basin. Proof of this is afforded by the great size and solidity of the ruins rising by the ancient route here.

The exceptional aridity of the climate prevailing here ever since the *Limes* was constructed about 101 B. C., made it possible to discover many very interesting relics of the life led during the first two centuries before and after Christ along this most desolate of borders. Hundreds of Chinese documents on wood excavated by me at the ruined watch-towers and stations throw light on the organization of the troops guarding the *Limes* line; on the elaborate system of military accounts controlling pay, leave, supplies and transport, etc. Most of these records, written not only on wood but also on silk and in a few instances on the oldest known paper, were found in shallow refuse heaps on to which they had been thrown out from time to time out of the "military Babus'" offices.

Equally interesting is the evidence afforded by the wall along which the ruined posts of the *Limes* with their watch-towers were placed. It was throughout constructed of carefully secured layers of fascines alternating with layers of stamped clay or gravel. This method was specially suited to withstand the most destructive of nature's forces in this desert region, slow grinding but almost incessant wind-erosion. Along those sections where the *Limes* line lay parallel to the prevailing direction of the winds, the wall still rises in remarkable preservation. Its survival conclusively proves that the climate on this ground has been arid in the extreme ever since the wall was first constructed more than two thousand years ago.

Beyond the western extremity of the Limes the direction of the ancient route is indicated only by a couple of advanced signal towers along the present caravan track leading towards Lop and by the configuration of the ground.

The difficulties of nature which beyond the end of the Limes had to be faced by the Chinese were great, indeed. They might well have appeared altogether prohibitive. But the Chinese at all times have been far more willing to face and overcome the difficulties and dangers of nature, however formidable, than to struggle with barbarian foes, *i.e.*, with people foolish enough to expose their lives to unnecessary risks—to put it politely—and to endanger those of others.

Starting from the extreme western point of the Limes the route was bound to lie along the desert depression which separates the southernmost chain of the utterly barren Kuruk-tāgh from the high sand ridges of the Kum-tāgh.

Strips of ground covered with light drift sand and scanty desert vegetation intervene here between the well defined shore line of the prehistoric sea and the dismal expanse of salt crust, mostly hard but in places still boggy, which marks its former extension into this depression. Thus for a distance of about 80 miles those following the ancient Chinese route could still count upon finding in places water, not altogether undrinkable, and a minimum of reeds and scrub for their animals.

The difficulties of moving large convoys and big bodies of troops over this desert ground must have been serious enough. But they are as nothing compared with the formidable obstacles to be faced on the onward journey to Lou-lan. About sixteen miles beyond the point where nowadays the last trace of vegetation is found, though no drinkable water, the salt encrusted great bay merges in the eastern extremity of the dried-up Lop sea bed. To trace from this side the route by which those old Chinese wayfarers had made their way to the nearest point once reached by water in Lou-lan, still close on a hundred miles off to the west in a straight line, would have meant for me an impossible problem.

It was only from the opposite side, that of Lou-lan, that I could in the winter of 1914 make my attempt with any chance of success and, let me add, with due regard for safety. The explorations which I carried out in 1906 among ruins in the dried-up delta of the Kuruk-daryā now waterless in all directions, had furnished full archæological

proof that they marked the site of a fortified station occupied by the Chinese down to the third century A. D. It had served as the western bridge-head, as it were, for the route which crossed the Lop Desert towards Tun-huang. Excessive wind-erosion proceeding ever since moisture and vegetation departed, has sculptured this ground into a maze of steep clay terraces and trenches, and has almost completely carried off the once massive ramparts. Reconnaissances made into the desert north-eastwards revealed there a succession of remains which clearly indicated that the ancient route towards China had followed that direction, at least in its initial portion.

The nearest among these was a cemetery situated some four miles off on the top of an isolated clay terrace or *Mesa*. Rapid clearing revealed that it contained grave-pits into which miscellaneous relics of earlier burials had been collected by pious hands at some period before Lou-lan was finally abandoned. The mass of beautiful figured silks here recovered have proved quite a revelation as regards the artistic style and technical perfection of those products of Chinese silk weaving which travelled westwards through Lou-lan, while trade still followed this route. These relics of Chinese textile art from the time of Christ and before, now brought to India to be preserved in a future museum at New Delhi, claim special interest. But equally important is it to note that among the decorated fabrics there are found fragments of exquisitely worked tapestries in wool which display a style unmistakably Hellenistic. We have in them striking illustration of a cultural influence which that ancient desert route also served for centuries, but in the reverse direction.

Continuing to the north-east for another twelve miles, we soon left behind the last dry river bed marked by trunks of wild poplars and tamarisks, dead for many centuries. Then we came upon the ruins of a small walled *castrum*, undoubtedly once serving as an advanced *point d'appui* on the road from Tun-huang. Its walls showed such close agreement in all constructive details with the wall of the westernmost Chinese Limes that there could be no doubt about its dating, just as this does, from the first military advance of the Chinese into the Tārīm basin.

The elevated position on the top of a high clay terrace, together with the exceptional aridity of the climate since ancient times, had assured preservation to remains of an outlying look-out post traced

some three miles further to the north-east. Here we found graves holding bodies of the indigenous Lou-lan people who once tenanted the small stronghold. Several of the bodies were so wonderfully well conserved, together with their burial deposits, that I felt myself brought here face to face with the race of semi-nomadic herdsmen and hunters whom the Han Annals describes as the native population of Lou-lan. Their features showed close affinity to that *Homo Alpinus* type which still continues the chief element in the racial constitution of the present population of the Tārīm basin and in its purity is found among the hillmen of the uppermost Oxus valleys.

We were here near the eastern extremity of the ground once reached by life-giving water from the "Dry river." Beyond to the east there lay the boundless expanse of shimmering salt, marking the dried-up sea bed. The topographical indications seemed to point to the ancient route having lain to the north-east. The ground ahead was sure to prove devoid of all resources for human life, including water. Careful preparation was hence essential for ensuring safety on such a journey through an absolutely waterless wilderness. So it became necessary for us to gain first the distant salt springs of Altmish-bulak at the foot of the Kuruk-tāgh to the north, in order that our hard-ried camels might gather fresh strength by a few days' grazing at reed beds as well as by the chance of a drink from melted ice after a fortnight's work in the waterless desert.

Having replenished there our supply of ice and taken fuel with which to melt it, we regained the vicinity of the outlying little fort. Beyond it I was fortunate enough to discover the remains, almost completely eroded, of an ancient watch-tower of the type familiar from the *Limes*. Further on there were no ruins to guide us; for we were now passing into ground which all through historical times must have been as devoid of plant or animal life as it now is.

But as we steered north-eastwards by the compass across absolutely barren wastes of clayey detritus or salt crust, chance came again and again to our help by strange finds. They seemed as if meant to assure us that we were still near the ancient track by which Chinese missions, troops and traders had toiled for four centuries through this lifeless wilderness. It must suffice here to mention what perhaps was the most striking and welcome of these finds. The last traces of dead vegetation had long remained behind when we suddenly found the

old route line plainly marked by some two hundred Chinese copper coins of the Han period strewn the dismal ground of salt-encrusted clay for a distance of about thirty yards. They lay in a well-defined line running from north-east to south-west. Clearly they had got loose from the string which tied them, and gradually dropped out through an opening of the bag or case in which they were being carried by some convoy. Some fifty yards away in the same direction there were scattered bronze arrowheads of Han type, all manifestly unused. There could be little doubt that coins and arrowheads had dropped from some convoy of military stores proceeding to Lou-lan in Han times.

That day's long march was taking us past a far stretching array of big *Mesas* or clay terraces which with their fantastically eroded shapes curiously suggested ruined towers, mansions or temples. Next day we arrived at a forbidding belt of salt-coated erosion terraces. They clearly corresponded to those which Chinese notices of the ancient route to Lou-lan repeatedly mention as the dreaded "White Dragon Mounds" and graphically describe. Progress between them was trying for our poor camels' feet, and also for us, men.

But still worse it was to face the crossing of the bed of the dead Lop sea with its terrible salt surface which I knew to lie beyond. The march of twenty miles across this petrified sea bed, with its hard salt crust crumpled up into big cakes aslant and pressure ridges between them, was most fatiguing for men and beasts alike. Archæological evidence of ancient traffic cropped up again in the shape of coins and beads, when through the opposite belt of "White Dragon Mounds" we gained the eastern shores of the ancient salt marsh. Three marches along these finally brought us to the debouchure of the Bêsh-toghrak valley where after twelve days we found again water.

I cannot discuss here the problem how traffic of such magnitude as the Chinese Annals indicate was organized and maintained on a route passing across some 120 miles of utterly barren ground, already in ancient times without water, fuel or grazing. But it is well to keep in view that great power of organization which was needed to solve it in practice. This feat may truly be looked upon as a triumph of the mind over matter.

The intercourse thus established through Central Asia suffered its first interruption about the beginning of our era through the rapid

decay of internal order, which took place in China at the close of the Former Han dynasty. For some sixty years the Tārīm basin was abandoned to the Huns, until at last the need of effective protection for the Kansu borders against Hun raids forced the Chinese Empire to start afresh upon a "forward policy" in Central Asia.

By a series of remarkable exploits the famous general Pan Ch'ao, the greatest of the soldier statesmen who ever served China's Central Asian policy, re-established effective imperial authority throughout the Tārīm basin. Pan Ch'ao's maxim, as stated by him in a very interesting memorial to the Emperor "was to use the barbarians for attacking the barbarians."

Chinese political influence was in consequence of Pan Ch'ao's triumph extended westwards even beyond the Pāmirs. Diplomatic relations were established with the Parthians and direct contact sought with distant Syria by means of a mission which A. D. 97 appears to have reached the sea in the Persian gulf. By A. D. 102 Chinese prestige and power in Central Asia may be said to have reached their culminating point. But Hun inroads and local revolts soon began to change these conditions favourable to peaceful Central-Asian trade intercourse. Imperial prestige gradually decayed in the Western Regions during the century of increasing internal weakness which preceded the final downfall of the dynasty, A. D. 220, and the silk trade from China to the Roman Empire took more and more to the sea route.

The epoch of the "Three Kingdoms" which followed saw China divided between rival dynasties, much as it is now between rival military dictators. Effective Chinese control over the whole of the Tārīm basin was not likely to be maintained in such troubled times. Yet there is evidence that this still continued to be open to trade and cultural influences both from the East and West.

The evidence is fortunately supplied by the abundant remains of two very interesting ruined sites I have been able to explore. I mean the ancient settlement brought to light by me in the desert sand beyond the termination of the Niya river and the ruins at and around the ancient Chinese station of Lou-lan. Both at the Niya site and in Lou-lan occupation had continued until about the close of the third century of our era.

At the Niya site it is particularly easy for us to reconstruct the conditions of life once led there. The careful construction of the

houses once tenanted by local officials or landholders; remains of well-made household furniture and implements; objects of decorative art in the shape of fine wood-carvings, etc., all attest a highly developed state of civilization. The products of local industrial arts and crafts clearly show the prevalence of a strong Hellenistic influence transmitted from Eastern Īrān and the north-western borders of India.

The powerful influence of Indian culture, mainly Buddhist, is very strikingly reflected in the mass of written records recovered in the ruined dwellings and the refuse heaps adjoining. At the Niya site I found by the hundred wooden documents comprising correspondence, mainly official or demi-official; contracts; accounts; miscellaneous memoranda and the like, all written in that early Indian language and script which during the first centuries before and after Christ was used on the Indian North-West Frontier and in the adjacent portions of Afghānistān. But the ingenious method of wooden stationery used for all these writings is undoubtedly of Chinese origin.

We are able with almost as much clearness to reconstruct the physical aspects of the life once witnessed by these sites. At the Niya site I could clearly make out the position and arrangement of the orchards and arbours, as marked by the trunks of their fruit trees and poplars, dead for sixteen hundreds years but often still upright. The terminal course of the Niya river, as it then ran, was definitely indicated at one place by the foot bridge lying across a dry bed which elsewhere is completely overrun by tamarisk-cones or smothered under sand dunes.

Here and elsewhere the archæological evidence uniformly points to the climatic conditions of the periods preceding abandonment having been practically as arid as they were since and are now. This observation has an important bearing upon the much-debated question of "desiccation." But I cannot spare time to treat this here. Instead we may resume, however rapidly, our survey of the part which the Tārīm basin has played in later phases of Central-Asian history.

While China itself was divided between rival dynasties, the Huns in the course of the fourth century had started westwards on the great move which ultimately led them to water their horses on the Danube, Rhine and Po. After an interval the Tārīm basin, together with vast territories to the north and west, passed for about a century

under the domination of a branch of the Huns, known in Western Asia as the Hephthalites or White Huns.

Neither this domination from outside nor a period of contested sovereignty within appears to have seriously affected the firm footing which Chinese civilization had acquired in the oases or to have interfered with the steady flow in the opposite direction of Buddhist doctrine and literary influence from easternmost Īrān and India. The growing closeness of religious and intellectual relations thus established is reflected by the journeys of Chinese Buddhist pilgrims who at this period made their way right through Central-Asia to the sacred places of Buddhism in distant India. Their narratives clearly show how cultural influences from both sides mingled in the territories which the pilgrim visited before descending across the Pāmīrs and Hindukush to the north-western borders of India.

In the third quarter of the sixth century a fresh wave in the stream of nomadic migration put the great confederacy of Turkish tribes, known to the Chinese as the Western Turks, in ascendancy over the vast Central-Asian region as well as the N. W. border lands of India, previously dominated by the White Huns.

The gradual consolidation of Chinese power marked by the accession of the great T'ang dynasty by A.D. 618, was at first accompanied by a policy of rigid seclusion on the north-western marches. But this was soon to give way to a 'forward policy' on a grand scale. The route along the easternmost T'ien-shan was then the only one practicable for serious military operations. Hence first Hāmi and subsequently Turfān had to be wrested from Turkish supremacy. Then in A. D. 660 the power of the western Turks was finally shattered by the Emperor Kao-tsung's forces. China thus succeeded to their claim over a vast dominion extending from the Altai mountains to beyond the Oxus and Hindukush.

The fact of China now claiming succession to the wide dominions once held by the Western Turks was bound to prove in time a source of trouble and weakness. The Chinese forces stationed in what were called 'the Four Garrisons' had to guard not merely the oases of the Tārīm basin but also territories to the north of the T'ien-shan. These offered attractive grazing grounds to nomads and were hence constantly subject to being disturbed by restless Turkish tribes such as are still hovering now between Altai and T'ien-shan. More serious still was the

danger presented by aggression on the part of the Tibetans who were then rapidly growing into a new military power.

Towards the middle of the eighth century there was added to the pressure from the Tibetans in the south fresh danger in the west from the steady advance of Arab conquest in the Oxus basin. The Tibetans were endeavouring to join hands with the Arabs as common foes of China's Central-Asian supremacy. By pushing down the Indus valley to Gilgit and thence across the Hindukush they actually reached the uppermost Oxus valley. This junction threatened the Chinese position in the Tārīm basin with being outflanked both in the east and west. An effort had to be made to ward off this serious strategic risk. It led to an enterprise which stands out as perhaps the most memorable among the many proofs of Chinese capacity for overcoming by organization formidable geographical obstacles.

In A. D. 747 the Deputy Protector General of the 'Four Garrisons', Kao Hsien-chih, collected a Chinese force of ten thousand men at Kāshgar and led it through the gorges and passes of the Muztāgh-atā range and across the inhospitable high valleys of the Pāmīrs to the uppermost Oxus. The careful account preserved of this enterprise in the Chinese Annals has allowed me to trace the several routes followed by the three columns into which the Chinese general divided his forces, obviously for the purpose of reducing the formidable difficulties of supply and transport. One traversed the whole width of the Pāmīrs towards Shughnān, probably along the line now utilized for the Russian cart road connecting Pamiriski Post with Khorok; having thus gained access to the resources available in Badakhshān this column moved up the Oxus through Wakhān. A second column was directed to the Great Pāmīr on the elevated plateau around Lake Victoria and thence descended, by a pass located by me on my journey across the Russian Pāmīrs in 1915, to Sarhad. A third column ascended Sarikol and thus gained across the Wakhjir Pass, the headwaters of the Āb-i-Panja, the main feeder of the Oxus.

How such a force could be maintained in those high mountain regions of the 'Roof of the World,' devoid of all local resources, is a problem which might well baffle a modern General Staff. After effecting a successful concentration at Sarhad, the highest habitable point on the Oxus, Kao Hsien-chih completely defeated the Tibetan force which was guarding the Barōghil, the only pass across the Hindu-

kush practicable for military purposes in this region. I may note here in passing that the way in which the Tibetans were here awaiting the attack behind a wall erected across the open valley bottom corresponded exactly to the time-honoured Tibetan scheme of defence displayed during the Tibet expedition of 1904 at the fights of Guru and the Karo-la.

But an achievement still more remarkable was Kao Hsien-chih's subsequent crossing of the very difficult glacier pass of the Darkōt, at an elevation of 15,600 feet into Yāsīn and Gilgit with a Chinese force of three thousand men. I had twice occasion to cross the Darkōt and feel sure that those few British officers, first among them General Barrow, whom the duty of looking after the Hindukush defences of India has brought to this scene of Kao Hsien-chih's exploit, would have thoroughly appreciated its greatness. The Chinese Annals significantly describe the characteristically Chinese stratagem by which the troops were induced to advance when they had gained the top of the pass and found themselves faced by the forbiddingly steep descent from it on the Yāsīn side. But that is 'another story.'

The prestige accruing to the Chinese arms from Kao Hsien-chih's triumph over formidable natural obstacles was deservedly great. But it did not save them from being signally worsted four years later. In a battle near Tashkend Kao Hsien-chih was completely defeated by the Arabs and their Turkish allies. About A. D. 750 the Tibetans from the south completely cut off the Tārīm basin from all direct communication with the Chinese empire. Yet the Chinese administrators and garrisons within the former, notwithstanding their isolation, succeeded in holding out for another forty years,—a heroic chapter in history. It has its modern counterpart in the maintenance of Chinese authority in Eastern Turkestan now, when support from Peking has ceased owing to the prevailing internal anarchy.

The period of four and half centuries following the disappearance of T'ang rule is a dark one in the history of the Tārīm basin. It saw the spread of Islām from the west, while in the east the successive domination of the Kansu marches by Tibetans and Tangut reduced or completely stopped contact with China proper. Then the phenomenal rise of the Mongols under the great Chingiz Khān, another Napoleon, in the first quarter of the thirteenth century, produced vast changes in political conditions throughout Asia.

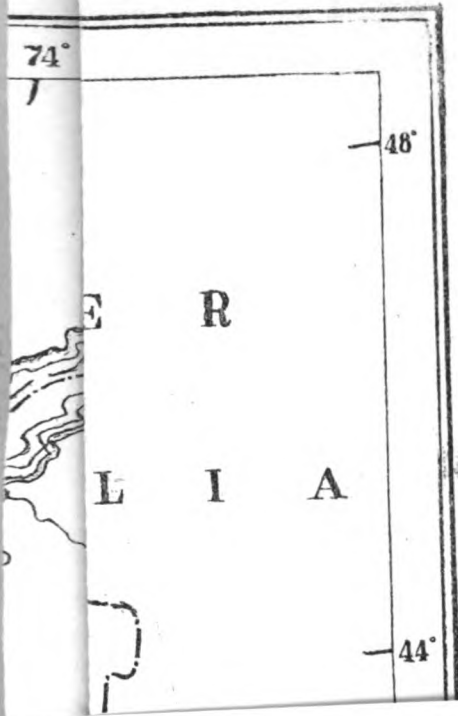
By the time he died in Kansu, A. D. 1227, his astonishing conquests had brought all countries from the Black Sea to the Yellow river under direct control of the Mongol "Great Khān". The establishment of one sovereignty across the whole of Asia again cleared the way for direct intercourse and trade between China, the Near East and Europe. The policy of the Mongol empire opened an epoch of free interchange between the Far East and the Far West in commerce, arts and knowledge, such as the world had never known before.

Among the accounts preserved to us of envoys, traders and travellers from Europe then seeking far off Cathay, none in accuracy of geographical detail and in human interest approach the immortal work of Marco Polo, the greatest of mediæval travellers.

The Mongol dominion over China which Marco Polo still saw in its full greatness under the Emperor Kublai, came to an end through internal decay within a century of Kublai's accession. The Chinese dynasty of the Ming which replaced it was content with safeguarding the north-western borders in Kansu by a policy of strict seclusion stifling trade. The Chia-yü-kuan gate of the mediæval Great Wall near Su-chou symbolizes this policy.

This continued until the close of the 17th century when the growing power of the Dzungars, Mongolian tribes established north of the T'ien-shan, forced a fresh advance into Central Asia upon the Manchu dynasty, then young and energetic. But it was not until 1755 that the great Manchu Emperor Ch'ien-lung finally brought the whole of the Tārīm basin as well as Dzungaria north of it under direct Chinese administration. Once again, as under the Han and T'ang, a policy purely defensive in its origin, had resulted in Chinese expansion over a vast Central-Asian region right up to the Pāmirs and the Altai mountains.

Chinese control of this region has continued to the present day, in spite of the growing internal weakness of the empire and the great upheaval caused by the Tungan or Chinese Muhammadan rebellion after the middle of the last century. The explanation lies in the fact that for the first time in history China's Central-Asian frontiers had become contiguous with those of a great civilized power, such as the Russian Empire was, capable of dominating the border populations and gradually restraining their nomadic migrations. It was Russia's temporary occupation of Kulja and of the fertile Ili valley which



facilitated the Chinese reconquest of the 'New Dominion' in 1877, after the Muhammadan rebellion had flung the Tārīm basin for a decennium first into anarchy and later on into oppressive misrule under Yākūb Beg, a usurper from Western Turkestan.

The strings of oases between the T'ien-shan and K'un-lun no longer serve now a great trade route. So the brave patient camels which carry what traffic there is as efficiently as in the times of Chang Ch'ien or Marco Polo, are not yet replaced by the rushing motor car or the bustling railways.

The traditions of China's great past as a Central-Asian power still protect the peace of this region. Let us hope, they will suffice also thereafter to ward off those troubles and sufferings of which its less secluded neighbour, Russian Turkestan, has had abundant experience during recent years.

THE SUPPRESSION OF RIOTS.

BY

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Introductory.

Action in support of the Civil Power is a duty which falls on the Army from time to time. This duty is regarded by everyone with distaste partly because it is not soldiering and partly because all soldiers feel that, whatever they do, unless they happen to be blessed with unusual luck, they are bound to do wrong in the eyes of others. In all instructions on the subject soldiers are warned that theirs is the sole responsibility for whatever action they take and that, to disperse a riotous mob, they must use no more force than is essential. Soldiers also know that, unless the necessity of their action is patent to all the world, and even when it is so patent, the enemies of England, within and without, will raise a torrent of propaganda in an effort to damage English prestige and weaken her Government and her case.

Hitherto no instruction, as far as is known, has been given in the art of dispersing a mob. Without such training it is thought that, in order to disperse a mob, fire will be opened sooner than it would be necessary if its dispersal is undertaken by troops having a knowledge of the tactics and trained in the methods to be used. This article is an attempt to provide for the above deficiency and is based on recent experience at Shanghai.

EVOLUTION OF A DRILL AND TACTICAL METHODS FOR DEALING WITH A RIOTOUS MOB.

It will be remembered that, as a result of much previous agitation, a riot broke out in Nanking Road, Shanghai, on May 30th, 1925, and attempts were made to burn down the Louza Police Station. The small force of police then available turned out and fired on the crowd as the only means of dispersing it. From that justifiable action, arose an Anti-British agitation which is one of the contributory causes of our troubles in China at the present day.

After this incident the Commissioner of Police formed a special unit trained, organized and always held ready to deal with riots. The opinion is held that this unit, by its organization, methods and training, has been able to quell several riots without the use of firearms where such use would otherwise have been necessary.

When the 9th (Jhansi) Infantry Brigade arrived at Shanghai on the 12th February 1927 it was evident that it had arrived in the nick of time. Apart from any threat from outside, the atmosphere of the Settlement was electric and the forces of disorder, aided and abetted by the Bolshevik element, were obviously about to seize an opportunity of making trouble. Political general strikes were threatened and broke out and the situation was tense.

Face to face with the probable necessity of having to quell riots the 9th (Jhansi) Infantry Brigade, having been informed of the unit created by the police, accepted their offer to train its battalions in the methods employed, and cadres from each battalion were instructed accordingly. The procedure and drill used by the Shanghai Police was adapted to suit military organization and all battalions were exercised in it. The strength of the Police Mob Street Unit (as it is called) is 47 but for military purposes it was decided to make the platoon the unit.

The arrival of the brigade cowed the mischief makers and, by its presence, prevented the outburst which was otherwise certain. The subsequent arrival of the remainder of the Shanghai Defence Force and the landing of International Forces assured tranquillity. In consequence the drill and methods have not been used in earnest by the troops, but, according to police experience and the study given to the methods, there is little doubt of its success.

THE METHOD, TACTICS AND DRILL EMPLOYED.

Organization and Equipment.

The platoon is organized into two sections armed with batons, one section with fixed bayonets, and one section (the L. G. section less the L. G. and the Nos. 1 and 2) as the firing section. The commander, bugler, Lewis gun with Nos. 1 and 2 and one man are mounted on a lorry.

In place of the lorry, which is about all that the troops employed on such duties would be likely to possess, the Shanghai Municipal Police have a special Mob Street Unit vehicle designed for the purpose. It is the size of a London bus, has closed sides, a covered in brick proof roof, two exits (which are strongly bolted from the inside by one of the commander's assistants when the bus is empty) and has a speed of 35 miles per hour. In the interior, besides the personnel, it carries ladders, axes, crowbars, etc., to overcome and destroy barricades. On

the exterior it carries two powerful searchlights besides six ordinary powerful headlights, two loud horns, a siren and a fire gong. On the top, slightly below the level of the roof, is a platform for the commander and his assistants. He has with him a riot flag, lachrymatory gas and smoke bombs, a lachrymatory gas gun, a machine gun, a 12 bore buck-shot gun and also gas masks for the drivers, commander and his assistants.

The Mob Street Platoon must be given, or must commandeer, a lorry answering as far as possible to the above description. If a large enough one cannot be provided the balance of the platoon which cannot be carried must be brought along in a second lorry close in rear, the composition of the platoon in the leading lorry being reduced to approximately the following, which can be carried in a 30 cwt. lorry :—

Nos. 1—3 Sections, 6 O. Rs. each.

Commander.

L. G. with Nos. 1 and 2.

Bugler.

This reduces the unit which forms up facing the crowd. It is just sufficient but must be reinforced to its full strength as rapidly as possible.

The Riot Flag mentioned above is a piece of white cloth 3 feet by 3 feet supported on two vertical poles. On it is written in suitable characters, a warning that fire is about to be opened. This is an indispensable piece of the equipment.

A closed lorry or van is useful as, apart from the protection from missiles which it gives, it also provides a suitable cage for prisoners for whom provision must be made.

Principles of Employment.

The general principle for the employment of the Mob Street Platoon is to use the minimum amount of force in the first instance increasing to the maximum by successive and definite steps as the situation dictates.

Intimidation, by the mere arrival and disciplined action of the platoon, may be sufficient in itself. This can be followed by the use of lachrymatory gas, followed by the use of batons, then the bayonet and lastly by fire, each and all under the *absolute* and *direct* control of the commander. The subordination of the mob to the will of the

Commander of the Platoon depends on the discipline including precision of drill, the rapidity of action, the organization and the power of command over the platoon.

The Use of Lachrymatory Gas, and Smoke.

The lachrymatory gas employed by the Shanghai Municipal Police is compressed in either a container of about one pound weight or in a cylindrical gun weighing about 15 lbs. On a container striking any substance the nozzle breaks off and the gas is emitted in liquid form. The gun is capable of ejecting a liquid stream and can hit at a range of about forty yards. The liquid, vapourising rapidly, irritates the skin and blinds the eyes, the effect lasting for about twenty minutes. No crowd can maintain an offensive attitude when it has been struck by gas, as each member effected will do all he can to escape. In order to create greater consternation and keep the crowd guessing, smoke bombs should be used with the gas bombs. The crowd, fearing that the smoke contains gas, will try to escape from it thus increasing the effect of a limited number of gas bombs.

Gas should not be used without smoke or smoke without gas as otherwise the smoke will lose its effect on the crowd.

When the gas has been used, the Baton Section should follow up the crowd until they themselves begin to be effected by the gas and the lorry should then move through them, the personnel in the lorry wearing gas masks for the purpose. It is doubtful whether it is sound for the Baton Sections to wear gas masks as their action is impeded by so doing. The gas should be used ordinarily against the rear of the crowd while the front is tackled by the Baton Sections.

Lachrymatory gas has not actually been used at Shanghai as it was only introduced a short time ago.

Tactical Methods.

The lorry with the Mob Street Platoon inside should approach the crowd at full speed and pull up within 50 yards of it.* The approach of the lorry sounding all its horns, etc., will often be sufficient

*Note.—When a special bus of a terrifying aspect is available it should approach to within ten yards of the crowd at full speed and the platoon should “fall in” in rear of it.

to cause the crowd to break. If this occurs the lorry should proceed through the crowd completing its break up by its passage through it. While approaching and on stopping in front of the mob, the commander must sum up the nature of the mob, its depth, etc., and then decide on his course of action. He may decide on one of the following courses of action :—

- i. Merely order the Mob Street Platoon to “fall in”.
- ii. Advance the Mob Street Platoon using batons only, and not using the bayonet or firing sections but keeping them in their proper positions according to the drill.
- iii. Throw gas and smoke bombs with the Mob Street Platoon advancing at the same time.
- iv. As in iii, but with the lorry advancing in front of the platoon through the mob. This should only be done if the lorry is of a special large closed in type.
- v. As in iii, but using the bayonet.
- vi. As in iii, but using the bayonet plus the opening of fire with his buckshot gun, followed by the fire of the firing section, followed by the fire of the Lewis gun.

If lachrymatory gas bombs and the gas guns are not available then the possibility of dispersing the mob without killing some of its members is lessened.

It is the experience of the Shanghai Municipal Police that the mere fact of “falling in” the Mob Street Unit is often sufficient to cause the mob to scatter, but, if it is not, then the advance of the Baton Sections generally completes the work while the use of gas and smoke makes its dispersal almost a certainty, even when the crowd is in a frenzy. The position of the commander, high up enabling him to overlook the crowd and see its depth, with his lethal weapons under his direct and personal control, ensures his freedom from the distractions of being involved in the street fighting, and his ability to control, absolutely, the opening, the volume, the nature, and the direction of the fire. It also enables him to warn the crowd that fire is about to be opened by displaying his riot flag and sounding all his warning noises.

The strength of the Mob Street Platoon is normally sufficient to oppose and disperse a mob frontally. If more troops are available,

and especially mounted troops, they are best employed in attacking the crowd on the flanks by moving down side streets. A reserve platoon in rear of the Mob Street Platoon is of course desirable in case the crowd should overpower the Mob Street Platoon, but if this occurs the action becomes a military operation.

If a suitable lorry is not available for employment as described above, the Mob Street Platoon will be obliged to approach the crowd on foot. In this event it should advance at a steady walk, but a vehicle of some kind from which the commander can view the scene of action is essential, and must be procured by some means. Without this adjunct to command, the dispersal of the crowd may become a dog fight and the opening of fire thereby becomes essential when, otherwise, it would not have been necessary.

Tanks and armoured cars are, of course, invaluable but they should not be employed by themselves if a Mob Street Platoon can be made available to co-operate with them. The mere approach of a tank or armoured car will almost certainly be sufficient to disperse the crowd but they should be employed in the same manner as the lorry of the Mob Street Platoon in order to obtain the full advantage of their effect, avoid the necessity of opening fire until all other means have been tried, and keep the crowd on the move when the armoured vehicles have broken it.

In all dealings with mobs it must be understood that a mob will never become dangerous or purposeful unless it has been formed some time. If the crowd can be kept moving and any small collections broken up, the formation of the crowd will be prevented.

DRILL.

General.

Drill must be carried out exactly, smartly, and with precision and should be as visible as possible to the crowd.

The success of a baton charge depends on the amount of control exercised by the section commander. Dressing must be maintained. Sections must reform rapidly and smartly on receiving the order.

The moral effect on the mob, caused by seeing the sections reform, is greater than that caused by the actual charge.

Formation.

The platoon "falls in" in fours by the lorry and then extends and takes up the following formations:—

- | | |
|-------------------|--|
| One Baton Section | .. Extended across the street.
Batons drawn.
Rifles slung. |
| One Baton Section | .. Extended across the street at
10 yards distance from leading
section.
Batons drawn.
Rifles slung. |

N. B.—The flank men of these sections must be right against the walls of the houses on either side.

- | | |
|---------------------|--|
| One Bayonet Section | .. Extended across the street at
20 yards distance from Second
Baton Section.
Bayonets fixed.
Rifles at high port. |
| One Firing Section | .. Extended across the street at
5 yards distance from Bayonet
Section.
Rifles at the "At Ease" position. |

The Commander with megaphone. The Lewis gun with Nos. 1 and 2. Bugler. Orderly with Riot Flag.	}	Mounted on a lorry immediately in rear of the Rifle Section.
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The platoon must be at full strength.

Helmets or pugries should be worn.

Revolvers should be unloaded.

Sections carry normal equipment.

Bayonets of Baton Section should be left in the lorry to prevent them being drawn by the crowd.

Magazines should be charged before the platoon reaches the scene of action.

Procedure.

When action is necessary the procedure will be—

No. 1 Baton Section will advance.

Remaining Sections advance at their correct distances.

If No. 1 Section fails to break the crowd No. 2 Baton Section will be put in.

If No. 2 Baton Section fails to break the crowd Nos. 1 and 2 Baton Sections, on the signal from the Officer in Command, will scatter to the right and left from the centre and double back in rear of No. 4 (Firing Section).

No. 3 Bayonet Section will come to the "On Guard Position" and will charge on the order of the Officer in Command.

If the "Bayonet Section" fails to break the mob it will, on the signal from the Officer in Command, scatter right and left from the centre and double back in rear of the "Firing Section."

The Riot Flag will then be waved, the bugle sounded and the crowd shouted at, while the "Firing Section" loads and comes to the port.

The "Firing Section" will fire on the order of the Officer in Command.

If the crowd commences to waver after the baton charge or after the bayonet charge or after a few shots have been fired the Baton Sections will be made to advance and repeat the process.

If the crowd breaks, the Mob Street Platoon will follow it up closely maintaining the same formation and keeping the crowd on the move.

Unless ordered to charge the sections will advance at the walk.

If the crowd becomes amenable Baton Sections will advance at the walk otherwise they will be ordered to charge.

If the Baton or Bayonet Sections are fired upon they will scatter and reform as above without orders.

DRILL ORDERS.

Order.

Detail.

"Fall in" (from lorry) .. The platoon "falls in" in fours by the lorry, less the commander and his assistants who remain in the lorry.

"Draw Batons." Extend .. Sections extend and take up correct distances as given above, the Rifle Section extending and then standing "at ease."

Baton Sections sling arms and draw batons while extending. Bayonet Section fixes bayonets with full detail on reaching its position.

*Order.**Detail.***No. 1 Section.****Advance or Charge**

.. The section will advance at the walk or charge the crowd.

No. 2 Section.**Advance or Charge**

.. As for No. 1 Section. It reinforces No. 1 Section.

Retire (on bugle)

.. Nos. 1 and 2 Sections (Baton) scatter to the right and left and form up in rear of the Rifle Section. The Bayonet Section comes to the "on guard" position as the Baton Section scatters. It is most important that this should be timed exactly to impress the mob.

Bayonet Section.**Advance or Charge**

.. The Bayonet Section charges the crowd.

Commence Fire (on bugle)**Firing Section Commander orders "Load."**

.. The Bayonet Section scatters to the right and left and forms up in rear of the Firing Section. The Firing Section loads and remains in the "Standing load position." The Riot Flag is displayed. Bugler keeps on sounding the "Commence Fire."

Fire (with detail, i. e., names of men, etc., who will fire).

The buckshot gun, such men of the Firing Section or the whole section or the Lewis gun will fire as ordered.

N. B.—When advancing the baton will be carried at the "Swords-Carry" Position.*Drill for Embussing and Debussing.*

The platoon will debuss in the following order:—

No. 1 Baton Section.**No. 2 Baton Section.****No. 3 Bayonet Section.****No. 4 Firing Section.**

To embuss the above order must be reversed, the commander, Lewis gun with Nos. 1 and 2, the bugler and orderly entering first.

Drill Detail.

Orders.

Detail.

Draw Batons ..	.. Loose baton and bring it in front of body with left hand. Extend right hand, palm uppermost, hang loop on thumb, turn hand inwards, grasp handle. The end of the handle should rest in the middle of the palm of the hand.
	(The wrist must <i>not</i> be placed through the loop). Bring right arm to the attention position, the Baton being held at right angles to the right arm.
Carry Batons ..	.. As for the "Swords Carry Position."
Replace Batons ..	.. Reverse of detail for "Draw Batons."
	Baton Sections having replaced batons, unsling arms.
	Bayonet Sections unfix.
	The whole "fall in" in fours facing the same direction.

When not drawn the batons will be hung on the web belt on the left hand side.

The baton should be used by a short quick swinging motion, the handle being held loosely, allowing the weight of the baton to do the work, the palm of the hand acting as a pivot and not gripping it firmly.

If the baton is gripped the muscles of the arm tire after a few blows.

The junction of the neck and shoulder is the best point to strike, as it renders the arm useless and is painful.

An uppercut swing, low in the body incapacitates a man. After a blow on the head a man may come to again very shortly.

THE FUEL PROBLEM.

By

LIEUT.-COLONEL F. D. FROST, C.B.E., M.C., I.A.S.C.

Fuel is one of the problems in war which appears to have attracted very little attention in the Army in India.

In India itself we are not faced with the problem because her forests provide us with all the fuel we need at a comparatively moderate cost. It is therefore difficult to get the Army accustomed to the idea of using any other fuel however much more convenient or cheap.

Most of the countries in which the Indian Army has been called upon to operate during the last 50 years are Mahomedan countries; and Mahomedans are essentially destroyers rather than planters of forests. Mesopotamia, Palestine, Persia, Arabia, Egypt and Afghanistan are all practically without forests.

In the Mesopotamia Campaign no firewood was obtainable and we depended for our fuel on firewood being despatched from India for over two years.

Its cost landed in Basra was prohibitive and required a great deal of shipping which could have been far more usefully employed on other purposes. The handling of firewood was costly and wasteful and there was considerable loss due to dryage.

Firewood was supplemented by bushwood supplied locally at considerable expense. The losses in firewood are heavy even in India where distances are not great.

It appears worth while spending money on experiments in other fuel to save the loss that is sure to occur in the event of any more operations on the frontier or overseas.

The obvious fuel to use is crude oil.

In Mesopotamia it is estimated that 3,60,000 rupees per mensem were saved by the issue of oil instead of firewood, and the shipping became available for other purposes. Oil cookers were first introduced by the 21st Arab Labour Corps in 1916 owing to the continual short issue of firewood. Experiments completely successful were made with one company and the remainder of the corps were quick to see its advantages. It was found that 5 ozs. of oil per man per day was sufficient, and this compared very favourably with the 2 lbs. of firewood which was usually inadequate.

The apparatus was quite simple. A trench was dug similar to that used for firewood with a flash pan to hold the oil at one end and a flue at the other. Over the trench was an iron sheet with holes for cooking pots. The attached sketch illustrates the working. At first there was slight inconvenience from the smoke which was thick, black and pungent and covered everything with soot.

This was eventually eliminated by the admixture of water in the flash pan. The water dripped from a small tin fixed to the oil container. The smoke nuisance then disappeared together with all complaints against this form of fuel.

As the experiment was so successful, all Arabs, Persians and Indian Labour Corps followed the example of the 21st Arab Labour Corps until over 100,000 men were using it.

The Indians, especially Indian Officers who often belonged to different castes in the same corps, at first raised objections. Those who could not enjoy the advantages of communal cooking in the Indian Officers' Mess were allowed firewood and all complaints vanished.

By the introduction of oil cookers camp duties were considerably reduced and the earning power of each corps was correspondingly increased.

Oil cookers were then introduced into Officers' Messes and private bungalows at very low cost and by the construction of a water tank round the flue, a constant supply of hot water was assured.

These cookers were simple in the extreme but anyone who attempted to make them complicated, as some experts are liable to do, turned success into failure with the result that certain individuals condemn them as useless. In spite of this they were introduced all over Mesopotamia into hospitals, all outstanding camps and into the High Commissioner's house.

Every new oil cooker erected caused the usual smoke nuisance until its users understood how to regulate the correct mixture of water and oil.

No form of cooker was invented in Mesopotamia suitable for transportation but this has now been done in
Animal Transport. India after several experiments. The Mesopotamia cooker is now constructed of iron and is easily transported by pack transport on field service. The following advantages are claimed

for its *economy in transport*. A string of four mules can carry the cooker with two days' rations of oil for a company. Two days' ration of firewood with utensils require fifteen mules.

One 30 cwt. lorry carries 10,752 rations of oil or the equivalent of approximately seven lorries of firewood.

	Lorries.
Firewood for one division requires ..	.. 14.5
Firewood for one cavalry brigade requires ..	.. 2.03
Firewood for A. T. and L. of C. requires..	.. 9.04
	<hr/> 25.57
Oil for one division requires ..	.. 1.91
Oil for one cavalry brigade requires ..	.. .28
Oil for one A. T. and L. of C. requires ..	.. 1.27
	<hr/> 3.46

A four-wheeler broad gauge wagon carries 500 full drums of oil or 57,600 rations. The same wagon will only carry 10,000 rations of firewood.

If the oil is transported in tank wagons and decanted at rail-head the economy in rail transport is still greater. Added to the saving in transport will be the saving of labour involved in handling firewood the worst possible commodity ever handled.

Economy in Cost.—The price of crude oil, Attock Oil Company, delivered at Peshawar is Rs. 72-7-0 per ton against Rs. 27-7-0 per ton of firewood.

But one ton of oil equals 7,068 rations.

But one ton of firewood equals 747 rations.

One hundred rations of oil cost Rs. 1.15.

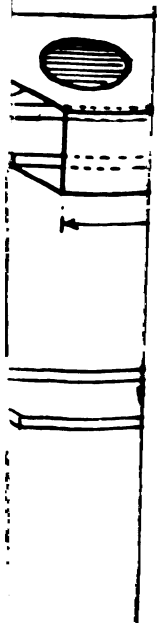
One hundred rations of firewood cost Rs. 2.80.

The cost of firewood delivered at Peshawar is more than double that of oil. Add the cost of transportation to the fighting line it will probably be ten times the cost.

This great reduction in transport is a matter which should be treated as urgent especially since it is a great financial saving as well. It is hoped that every encouragement may be given. Nothing is easier than to make it a failure.

A description of the experimental pattern is attached.

POR



An experimental Oil Cooker for use in the Field.

An experimental oil cooker has been designed at Northern Command Headquarters and a model constructed by No. 2 Company, S. & M. in co-operation with the 3rd/9th Jats at Rawalpindi and experiments carried out on September 24th.

The attached sketch gives the dimensions.

Description—

The top plate which was originally designed to cover a trench is now supported by sides which take the place of a trench and the whole forms a stove.

This makes very little addition to the weight while it has the advantage of always being ready for use even in waterlogged country.

2. This apparatus is divided into 3 sections each 2' 6" long to fit one within the other. Holes are cut in the 1st and 3rd sections leaving the centre section for the cooking of *chupattis* (i. e., forming a *tawa*).

3. The flash pan inside the stove should be 4 feet long by 3 inches wide in two sections overlapping.

Instructions—

Before using the cooker the ground should be prepared so that the flash pan will rest on gently sloping ground to allow the oil to run down to the far end of the pan.

2. Before adjusting the stove on top of the flash pan smear the latter with oil and put some old rags, paper or dry grass at feed end to facilitate ignition.

3. After adjusting the stove see that all joints are covered with mud and that the *degchis* completely cover the holes in the top plate. This will prevent smoke from injuring the *chupattis*.

Some objections may be expected from Indian Troops to the introduction of this method but knowledge and working of the cooker should overcome these difficulties.

The use of oil fuel is considered so important from the point of view of economy in transport in War that it is hoped that every encouragement may be given. Nothing is easier than to render the process a failure.

WITH THE ALLIES IN SIBERIA, 1918-1920.

BY

COLONEL B. W. SHUTTLEWORTH, I. A.

I.—The Causes Which Led to Allied Intervention in Siberia.

For a better understanding of the work of the Allies in Siberia it is necessary to explain briefly the reasons which induced the Powers to intervene in Siberia during the latter stages of the Great War, and the causes which compelled them to remain there after the Armistice.

The year 1918 opened none too hopefully for the Allied Powers. The Russian debacle and Revolution had enabled Germany, relieved of all anxiety as to her eastern front, to transfer troops from there to reinforce her other fronts. America was not yet ready to exert her full military strength in France. The submarine menace had as yet not been mastered and it was quite within the bounds of possibility that these hostile submarines would make the transporting of the American army across the Atlantic to France, and the supplying of that same army with munitions and food, a most difficult matter. Furthermore three and a half years of war had been a severe drain on the man power of the Allies.

The Allied Council in Paris then had to consider other ways and means by which pressure might be exerted against the Central Powers and by which full use might be made of all available armed forces. Operations against Germany through Siberia offered a solution of the difficulty. The re-establishing of this eastern front against Germany would result in—

- (1) The prevention of the transference of enemy troops from east to west.
- (2) The effective employment of the whole of the available American army, who would be transported across the submarine free Pacific and landed at Vladivostok.
- (3) The co-operation of the Japanese army. Up to this time, although the Japanese navy had been able to assist, there had been no opportunities for the army to do so.
- (4) The denying to Germany of the material resources of Russia. With these resources at her disposal Germany would not be greatly affected by our maritime blockade.

Operations through Siberia would also enable the various Anti-German forces, still existent in Russia and Siberia, to co-operate with the Allies.

The mastering of the submarine menace and the stemming of the great German offensive of March 1918 considerably altered the situation as regards Siberia, but the Allied Powers still considered it necessary to use it as a line of attack against Germany, employing not only the various Russian forces who were hostile to Germany, but also the large and well-trained Czecho-Slovak army, prisoners of war from the Austrian army captured by the Russians. These Czechs, whose sympathies were with the Allies, were only too ready to take the field against the Germans.

The signing of the Armistice caused yet another change in the situation. The need for the reconstruction of the eastern front against Germany now no longer existed, but the Allies found that they were still compelled to stay for various other reasons. The chief reason which prompted Great Britain to continue her aid to the Anti-German forces, who were at the same time the Anti-Bolshevik forces, was the need to assist the British troops in Archangel and the Murmansk Coast to hold their ground until the spring, before which time it would not be possible to withdraw them from the ice-bound ports of Northern Russia. Pressure exerted against the Bolsheviks on other fronts would prevent them from massing any considerable strength against the British North Russian force. Direct help could not be given and, therefore, it was decided to give indirect help, the means adopted being the support of Kolchak's Siberian army. At this stage of the proceedings the Allies also felt that they could not very well forsake the various Anti-Bolshevik forces who had been willing to assist against the Central Powers.

At the Peace Conference efforts were made to bring the two contending parties together, but, as the Soviet authorities refused to suspend hostilities whilst terms were being discussed, these negotiations broke down. The Allies hoped that with the cessation of hostilities against the Central Powers peace would ensue throughout Europe. They realized that the material resources of Russia and Siberia would greatly assist in the reconstruction of Europe after the Great War and these resources would, of course, not be available so long as Civil War lasted. As the "Reds" refused to assist bringing about this

peace, the Allies continued to help the "Whites," hoping by that means to force peace on the "Reds," and they continued this help until the fall of the Kolchak Government early in 1920.

II.—The Political Situation in Siberia, 1918-1920.

Early in 1918 the only form of settled Government in Siberia was in the vicinity of Chita in the provinces east of Lake Baikal, with General Semenov, a Cossack leader, at its head. General Semenov's authority, however, extended over but a very small part of this vast country.

In September 1918, a Congress of "All Russian and Siberian Parties and Governments" was held at Ufa when the supreme power in Siberia was vested in a Directorate of Five. This Government was distrusted and proved unable to cope with the situation. On the 18th November 1918 a Council of Ministers carried out a *coup d'état* appointing the then Minister of War—Admiral Kolchak—"Regent and Supreme Commander-in-Chief." This appointment, although approved by certain parties, was disliked by the Czecho-Slovak forces and by many of the Russian officers. However, by the end of the year the successes of the Siberian armies in the field were instrumental in obtaining for Kolchak the support of most of the Anti-Bolshevik parties in Siberia with the exception of Semenov, who still refused to acknowledge Kolchak's Regency and remained an independent leader.

During the early part of 1919, Admiral Kolchak's Government at Omsk became more stable. Kolchak had by that time been recognized as the Supreme Russian authority by the Anti-Bolshevik leaders in other parts of Russia, *i.e.*, General Denekin in South Russia; General Yudenitch in the Baltic States, and General Miller in North Russia. East Siberia still remained unsettled and bands of Russians in sympathy with Bolshevik aims, and emboldened by General Semenov's refusal to acknowledge Kolchak, made constant raids on the Trans-Siberian Railway, necessitating the employment of a large number of troops for its protection.

In April 1919, it was suggested that the Allied Powers should recognise Kolchak's Government as the Provisional Government in Siberia. Such recognition would have had a great effect politically not only in Siberia, but also in other parts of Anti-Bolshevik Russia. The Allied Powers, though being fully prepared to assist Kolchak with munitions, clothing, equipment, etc., did not consider the time yet

ripe for official recognition. This was a severe disappointment to the Kolchak Government which had hoped that its enlightened policy would win for it the recognition of the Allied Powers. The failure to obtain this recognition caused it a distinct set-back, politically.

During the summer and autumn of 1919, the so-far successful Siberian army met with a series of reverses and started to fall back on to Omsk. This reacted on the political situation, which gradually grew from bad to worse. The railways were in a bad state, and the country being unsettled, the people were unable to obtain many of the ordinary necessities of life. For this condition of affairs they naturally, but quite unjustly, blamed the Government, thus further adding to its unpopularity. This state of dissatisfaction with the Government proved fruitful soil in which the seeds of Bolshevik propaganda flourished.

In October the situation at the front became so critical that the Government was moved back from Omsk to Irkutsk. After this move the position of Kolchak and his Government was most precarious. In November General Gaida, a Czecho-Slovak, who had at one time commanded the Siberian Northern Army, attempted a *coup d'état* at Vladivostok. Fierce fighting resulted in the defeat of the Revolutionaries and the capture and deportation of Gaida.

At the end of December a second revolution broke out—this time in Irkutsk. The railway station was held by the Revolutionary troops, whilst the town remained in the hands of Kolchak's supporters. Semenov, suddenly realizing the gravity of his own isolated position in a Bolshevik country, came to Kolchak's assistance with an armoured train, but was unable to turn the scales in his favour. Subsequently, the position of the Allied Representatives in Irkutsk became so dangerous that the Japanese had to move up a battalion for their protection.

Early in 1920, Admiral Kolchak, seeing the hopelessness of his position, resigned and asked the Czech troops in the town for their protection. The Revolutionaries at once set up a new party called "The Political Centre Party Government". The life of this party was short-lived and before the end of January Irkutsk and the whole of the surrounding country was definitely under Bolshevik control. The Government gold reserve, worth several million sterling, fell into the hands of the "Reds". In September 1919, Major-General Sir

Alfred Knox, the head of the British Military Mission, had urged Admiral Kolchak to have this gold removed to Vladivostok and there be placed under an International guard. Kolchak did not accept this advice, but instead, asked for and received permission, to move it down to Irkutsk under a strong armed guard of the 1/9th Hampshire Regiment. He feared to trust his own troops to escort the money.

On the 15th January 1920, the Czechs, who were completely surrounded by Revolutionary forces, were compelled by their enemies to surrender the persons of Admiral Kolchak and his President of the Council. Three weeks later, at a special meeting, the Military Revolutionary Committee decided that these two Ministers were to be shot. Three hours later, before any of the Allied Representatives could intervene on their behalf, the order was carried into effect.

III.—Military Operations.

In December 1917, the Supreme War Council in Paris passed a resolution recommending that all the national groups in Russia who were determined to continue the war should be supported by the Allied Powers. In February 1918, on confirmation of reports that the Bolsheviks had been arming several thousand German and Austrian prisoners-of-war, the British Government took the first step towards the support of the Pro-Ally movement in Siberia by subsidizing General Semenov, the Cossack leader, who had raised an independent force in East Baikal. The Japanese assisted by providing him with arms. In March, news was received of the movement of a Czecho-Slovak Corps, numbering 50,000 of all arms, from the Ukraine towards Chelyabinsk. This Corps had been organized largely by the efforts of the French from prisoners from the Austrian Army in Russia. In these early days the Bolsheviks actually assisted the movement by affording railway facilities. A month later, owing to disorders in the town, a force of British and Japanese Marines landed in Vladivostok. In the same month, as a first step towards the reconstruction of the Eastern Front against Germany, the Supreme War Council advocated the active intervention of Japan in Siberia as far westwards as Omsk or Chelyabinsk, but this never materialised. It was also suggested that the Czech troops who were conveniently placed should be diverted to Archangel and the Murmansk coast. The occupation of these ports by Czech troops would have frustrated the German designs on the northern ports of Russia, and no sooner had the Czechs started to move north

than the Bolsheviks, acting under German orders, attacked the troops at Penza and Chelyabinsk and brought this northward movement to a standstill.

In May 1918, an outbreak of Bolshevism occurred in Trans-Baikalia. One party threatened Semenov's small force on the Manchurian border, whilst another party from the Amur and Usuri Districts began to advance on Vladivostok. In order to release the Czech troops in Vladivostok to meet this threat the British Government ordered the 25th (Garrison) Battalion of the Middlesex Regiment, under Lieut.-Col. John Ward, C.M.G., M.P., from Hong-Kong to Siberia. The British battalion arrived on the 3rd August and was followed shortly by a French composite battalion and a few guns. The Americans, Japanese and Italians also undertook to send small contingents. These Allied forces were placed under the command of the Japanese General, Otani. Meanwhile, the Czech forces had quelled Bolshevik outbreaks in Western Siberia and had enabled the formation of Pro-Ally Russian Military forces to be taken in hand. In July, the Czechs agreed to form part of the forces destined to reform the Eastern Front. In August a Japanese force, assisted by French and British detachments (including the 25th Middlesex Regiment) and by naval guns from H. M. S. "Suffolk," commenced operations against the Bolsheviks on the Usuri front and within a month had secured the whole of the Amur Railway. In August also, Semenov, supported by the 7th Japanese Division, started on an offensive from Western Manchuria and worked westwards along the railway. Late in September he joined hands at the Onon River with a Czech force, which had been fighting its way eastwards from Krasnoyarsk. This resulted in through communication being opened on the Trans-Siberian Railway from Vladivostok to the Volga.

In the autumn the Czech forces in Trans-Baikalia, also the British, French and Italian Contingents, moved up to Western Siberia, whilst the Japanese controlled the Trans-Baikal, Amur and Chinese Eastern Railway, and the Americans guarded the Vladivostok area. A month before the Armistice the situation was particularly favourable. The Allies were well on the way to opening up communications which would enable them to reconstruct the Eastern Front against Germany.

The Czecho-Slovak and Siberian forces, operating in Western Siberia and Eastern Russia, were at this time divided into two armies—

a "Northern" under a Czech General, Gaida, moving astride the Omsk-Tyumen-Ekaterinburg-Petrograd Railway; and a "Western" under a Russian General, Khangin, moving astride the Chelyabinsk-Samara-Moscow Railway. The Bolsheviks, now realizing the danger from this large force, concentrated greatly superior forces against Khangin's Army, which was well in advance of Gaida's, and drove it back slowly towards the Urals. At the same time Gaida continued to advance, with the result that at the end of the year both armies were more or less in a line.

In January 1919, the strength and disposition of the opposing forces on the Siberian Front were as follows:—

I.—"White" Russian.

At the beginning of the year the Siberian Government had under arms about 97,000 men, a force composed of Russians, Siberians and Cossacks, of whom 62,000 were holding the Perm-Ufa-Orenburg Front. Mixed with them were about 10,000 Czechs, with a further 17,000 in close support. The Czechs also provided about 11,000 men on the lines of communication scattered along the Trans-Siberian Railway from Lake Baikal westwards. The Siberian Government had also called to the colours another 110,000 men, distributed amongst the various depots awaiting organization and training.

II.—The Allied Forces.

- (a) *British*.—25th (Garrison) Battalion Middlesex Regiment distributed between Omsk, Krasnoyarsk and Vladivostok; later concentrated at Vladivostok. 1st/9th Hampshire Regiment *en route* from Vladivostok to Omsk; later moved up to Ekaterinburg.

Armoured train, with naval guns and detachment from H. M. S. "Suffolk."

11,000 Canadians at Vladivostok, the advance party of the Canadian Contingent.

- (b) *Japanese*.—58,000 men between Lake Baikal and the coast.

- (c) *United States of America*.—8,500 men in the Vladivostok area.

- (d) *French*.—One Colonial battalion and one battery of 12 guns at Chelyabinsk.

(e) *Italian*.—1,600 men at Krasnoyarsk.

(f) There were also a small number of Roumanians, Serbians, Letts and Chinese assisting.

The Canadian Government would not allow its troops to be sent further west than Vladivostok, whilst the United States and Japanese Governments drew their line at Lake Baikal.

III.—Bolshevik Forces.

Five Soviet Armies, totalling a strength of 120,000 men under the command of Kameneff, were disposed on the Siberian Front.

During the first few months of 1919 the Northern Army continued to advance slowly. Encouraged by this advance the Russian Higher Command ordered the Western Army also to advance. This was a most unfortunate and short-sighted decision, for, although it resulted in early success, it ended in ultimate disaster. The Higher Command was well aware of the fact that this army lacked depth and that the divisions which might have been called upon to reinforce it were still only in the early stages of training.

Early in March the Western Army began its attack and during that month and April advanced steadily. The advance in April alone was, on an average, 70 miles along the whole front. The Bolsheviks, being unprepared for this onslaught, fell back in disorder. The Northern Army was also able to advance, but at a slower pace as the opposition against it was stiffer. The end of April 1919 registered the high-water mark of the advance of the Siberian Army on Petrograd and Moscow, and it might also be mentioned here that these successes had an important influence on the political situation and helped to stabilize Kolchak's newly-established Government. The Bolsheviks, realizing the seriousness of this thrust, hastened up troops from the interior, from South Russia and from Turkestan and commenced a counter-move early in May. The Northern Army being deployed in depth was able not only to hold the enemy attacks, but also to make slight progress. The Western Army, on the other hand, having no reserves behind it, had to give way and was driven back precipitately towards the Urals. Kolchak, in order to restore the situation, threw in reinforcements in the shape of the partly trained divisions in rear, but as these were moved up a division at a time their effect was lost. Bad strategy was, of course, the primary cause

of the collapse of the Western Army, but bad leadership in the field and the influence of Bolshevik propaganda also played their part.

By the end of June 1919 the military situation had become very unfavourable. The retreat of the Western Army uncovered Gaida's left flank, obliging him to withdraw. Even now the situation might have been saved had the advice of the Allied Generals been followed, for there were still three divisions left under training which would have been ready to take the field in a few months. However, instead of waiting until these divisions were ready, the Chief of the Staff decided to send them up at once. A further mistake was made by dividing these reinforcements and sending them to different portions of the line, instead of letting their whole weight be felt at some critical point. These divisions were engaged with the enemy six weeks after the men had left their homes, and as most of the six weeks had been spent in travelling the men had had but little training. One of the divisions went into action at the end of a 40 miles march and 5,000 men deserted to the enemy, taking with them their British uniforms, rifles and equipment. As the military successes earlier in the year had aided in stabilizing the position of the Kolchak Government, so now the military reverses had the converse effect and hastened its downfall.

By the end of July the Siberian Army had lost the line of the Urals and the retreat continued throughout August. The Bolsheviks, now under the impression that they had nothing further to fear from this army, withdrew large numbers of their troops from that front and reinforced their Southern Army, which was giving way before Denekin. This gave Kolchak's forces distinct numerical superiority over them. The then Commander-in-Chief, General Dietrikhs, seized the opportunity and, although the army had retired six hundred miles since the beginning of May, he was able to pull them together so that they not only checked the enemy advance, but temporarily regained the initiative. Early in September they started moving westwards, driving the Bolsheviks before them, and by the end of the month had advanced one hundred miles; the advance would have been greater had the Siberian Cossacks on the left flank carried out the task allotted to them. The success was short-lived, for early in October the Bolsheviks, having been reinforced, delivered a strong counterattack and drove the Siberian Army back again. This failure was due to the fact that the Siberian Army had not learnt its lesson and again was not organized in depth.

By November, the Siberian Army ceased to be in any sense a fighting force and fell back hurriedly. On the 14th, Omsk was evacuated, large quantities of stores and ammunition being left behind. Taiga and Tomsk were lost by the end of December, and Krasnoyarsk on the 8th January 1920.

In February 1920, all that was left of Kolchak's Army was about 6,000 men in the area south of Lake Baikal and 10,000 in Samirechia, who were endeavouring to escape into Mongolia. The Bolsheviks, however, were not able to advance east of Irkutsk, for the Japanese forces continued to hold the country east of Lake Baikal.

A study of the map will show what a strong position the Bolsheviks were in as compared with the "White" Russians. They were working on "interior lines" and were well served by railways radiating outwards from Moscow on to every front. It was a comparatively easy matter, therefore, for them to transfer troops from one front to another to meet an advance. It is true, however, that had every "White" Army been able to advance in strength at one and the same time the Bolsheviks might have been defeated, but owing to the want of a thorough understanding between the various commanders, and owing to bad leadership, mistrust and jealousy of one another on the part of the more junior leaders, this was never accomplished.

The "Red" Army, moreover, was in occupation of European Russia with all its resources and manufacturies, and as these were well organised, the army could be supplied with all its needs. The "White" Army, on the other hand, had to call on the Allied Powers to supply it with its requirements.

It was essential for the successful conduct of the operations that the Trans-Siberian Railway should be in efficient working order, but in the beginning of 1919 this was far from being the case; in fact it was running so badly that only one daily train each way could be relied on and it appeared probable that at the end of two or three months the railway would shut down altogether. This one railway, running the length of Siberia, was a most vital factor in the general situation, for without it the forwarding of supplies and war stores from the sea to the front would have been an impossibility. As the Russians themselves were clearly incapable of effecting any improvement, the Allies were compelled to intervene and take the railway in hand. An Inter-Allied Railway Board was formed with an American as President, and Brigadier-General Jack, head of the British Railway

Mission, as one of its members, to control and improve the working of the line. In order to decentralise work and responsibility each of the Allied Powers was given its own portion of the line to control, working of course, under the orders of the Railway Board. The British portion of the line was that lying west of Omsk.

Shortly after the Board took over the management of the line there was a marked improvement in its working and several passenger and goods trains were run daily in each direction. There were many difficulties against which to contend, not the least of them being the apathy and incompetence of the Russian railway officials. Another factor which added to the difficulties was the misuse of railway wagons. There were literally thousands of covered goods wagons used to accommodate the troops guarding the line and the very large numbers of homeless refugees, who were fleeing before the advancing Soviet Army. Practically every station on the line contained its quota of such wagons, blocking up sidings which were urgently needed for train shunting. A weekly express train, consisting of 1st, 2nd and 3rd class carriages, sleeping cars of the "Wagon-Lit" Company and a restaurant car, was run between Omsk and Vladivostok, the journey occupying seven or eight days. The ordinary passenger trains covered the same distance in from 14 to 16 days and goods trains from 26 to 28. The majority of the personnel of the Mission travelled up in goods trains as escort to war stores being sent to the front. Their wagons were fitted up with bunks or camp beds and, as the train stopped daily for an hour or so at a convenient station to enable supplies to be replenished, the journey was not quite so uninteresting and monotonous as it would appear.

The following figures of distances on the Trans-Siberian Railway may help to a better understanding of the task before the Railway Board in ensuring a smooth running of trains:—

Vladivostok to :—

				Miles.
Chita	..	..	..	.. 1,250
Irkutsk	..	..	..	.. 1,900
Omsk	..	..	..	.. 3,500
Ekaterinburg	..	..	..	.. 4,050

Compare this with Bombay to :—

Lahore	..	..	..	.. 1,160
Peshawar	..	..	..	.. 1,450
Calcutta	..	..	..	.. 1,350

Not only did the British Railway Mission control the line west of Omsk, but it also provided Railway Transport Officers at all the important railway stations along the line, their duties being to assist British travellers moving up or down the line and also to ensure that wagons containing British war stores were not side-tracked into sidings and cut off the trains.

During the evacuation of Perm and of Ekaterinburg in July 1919 the Russian Railway Authorities were faced with the problem of getting away large numbers of refugees, stores and rolling stock, the latter consisting of a great many engines and some 18,000 wagons. They tried to tackle the task themselves, but found it an impossible one. They then asked General Jack to take over complete control. This he did, and he and his British Staff worked so well that they were able to get away all but 1,000 of the wagons.

IV.—The Allies in Siberia.

The Allied Powers who agreed to assist the White Russians sent diplomatic representatives to the seat of the Siberian Government at Omsk. The British Diplomatic Representative was Sir Charles Elliot, who subsequently became Ambassador at Tokyo.

For the purposes of the command of the Allied troops and the control of the Allied Missions, Siberia was divided into two spheres, that west of Lake Baikal being placed under the French General, Janin, and that east of the lake under General Otani, a Japanese General, who was later relieved by General Oi. Major-General Sir A. W. Knox, K.C.B., Indian Army, head of the British Military Mission, acted as an assistant to General Janin and, at the same time, was responsible for the distribution of all British war stores received from overseas and for advising the Russian authorities in the organization and training of new formations being raised in the back areas; he was also largely responsible for the founding and control of schools of instruction for Russian officers, cadets and non-commissioned officers.

In order to be free to move up and down the line General Knox appointed Brigadier General J. M. Blair, C.M.G., D.S.O., Gordon Highlanders, to act as the British representative on the Inter-Allied War Council at Vladivostok. Later, General Blair was moved up to Ekaterinburg to take charge of the Mission at that place, being succeeded at Vladivostok by Colonel Grogan.

There were three separate and distinct British Missions in Siberia, all working together for a common object, a Naval Mission, the Military Mission under General Knox, and a Railway Mission under Brigadier-General A. Jack of the South American Railways.

The British Naval Mission.

Two cruisers, H. M. S. "Suffolk" and H. M. S. "Kent" were sent out to Vladivostok as part of the Allied Fleet in those waters. In the middle of 1918 H. M. S. "Suffolk" furnished a naval detachment, which manned an armoured train mounting one 6-inch naval gun and four 12-pounders. This train first took part in the fighting on the Usuri front in July of that year, and later, when through communication was opened, the train moved westwards to Perm.

The British Military Mission.

It was in July 1918 that the British War Cabinet sanctioned the despatch to Vladivostok of a British Military Mission. Before the end of the year the British Government had sanctioned the provision of clothing, necessaries and equipment for 200,000 men and the despatch of sufficient instructors for the manning of training schools for training 3,000 officers and non-commissioned officers.

The end of the war and the signing of the Armistice altered not only the whole situation, but also the conditions under which British troops could be employed in Siberia. Our huge war time army was rapidly decreasing in size and it was only natural that the British Government should be anxious to withdraw the two battalions in Siberia to enable the men in them to return to civil life. Accordingly, early in 1919 General Knox was informed that it was proposed to withdraw the Canadian troops and the two British battalions and, at the same time, to increase the mission to 2,000 officers and men.

As a matter of fact, the kaleidescopic changes which took place, both in the political and in the military situation in Siberia, caused the Government at Home to change its plans more than once during the year 1919 with the result that, in addition to the withdrawal of the troops, the Military Mission was also reduced in numbers and its scope considerably curtailed. The duty of the mission was primarily to supervise the distribution of war stores and to assist in the running of schools of instruction, but it had also to collect and transmit Home intelligence from the front. Later it undertook the officering and training of an Anglo-Russian Regiment at Ekaterinburg.

In order to handle the war stores sent out from various parts of the Empire, an Administrative and an Ordnance Staff were established at Vladivostok and branch Ordnance Depots were opened at various points along the line of railway. The labour at Vladivostok consisted of a party of 250 Austrian prisoners of war, who were placed at the disposal of the British Mission by the Russian Military authorities. The distribution of stores was carried out under the direct orders of General Knox. Owing to the looting propensities of the Russians, the whole of the stores had to be handled by British personnel, conveyed up country in wagons with the Union Jack painted on both sides, and under British guards. Without these most necessary precautions the trains and their contents would never have reached their destination.

Ships with arms, ammunition, equipment, clothing, etc., etc., from England, Canada and India began to arrive at Vladivostok early in October 1918, and from then until October 1919, a total of 79 ships arrived carrying approximately 97,000 tons of war stores. By the end of 1919 the British Military Mission had fully equipped and clothed an army of 205,000 and had provided it with arms, ammunition, signalling stores, saddlery and other military necessities. During the first five months of its activities the mission had sent up to Omsk no less than 170,000 rifles and 150 million rounds of small arm ammunition. During the whole of 1919 every round of rifle ammunition fired on the Siberian front by the "White" troops, was of British manufacture, conveyed to Vladivostok in British ships, handled by British personnel, sent up to Omsk in trains paid for by the British Government, and under British guards.

The Administrative and Ordnance Staffs had many difficulties against which to contend, chief amongst them being the chaotic condition of the Trans-Siberian Railway, shortage of rolling stock, shortage of storage accommodation, lack of good interpreters and the intense cold.

In addition to the ordinary war stores a certain number of 18-pounder field guns and howitzers were also sent out. The horses for these were bought in Canada. On the way up to Ekaterinburg the train carrying the horses was derailed and attacked by Bolsheviks. Matters would have gone very hardly with the British personnel in charge had not an armed party of Czecho-Slovak troops been in the

train moving from one station to the next ; this party turned out and drove off the attack. Fortunately, only a few of the horses were killed in the accident.

In contrast to the care and trouble taken by the mission personnel in dealing with and safeguarding these stores, was the Russian want of care and apathy in handling them after receipt ; large quantities were left behind when the " White " Army withdrew from Ekaterinburg and from Omsk, entirely due to want of forethought in arranging for their evacuation. Numbers of the deserters who went over from the " Whites " to the " Reds " took their new British uniforms, equipment and rifles with them. These desertions were due largely to Bolshevik propaganda and want of counter-propaganda on the part of the " Whites ".

The British Red Cross and other societies sent out many tons of medical stores and comforts, which were distributed where required.

Training.—The mission occupied rather a peculiar position, in that it was not able actively to intervene in the training or in the organization of the " White " Army. General Knox and his officers could but offer advice and, as often as not, this advice was disregarded.

Training schools for the training of young officers, non-commissioned officers and cadets were opened at :—

Russian Island—at the entrance to Vladivostok harbour.

Irkutsk.

Novo Nikalaevsk—Artillery School.

Tomsk.

Ekaterinburg.

At each of these schools were British officers and non-commissioned officer instructors, whose nominal duty it was to assist the Russian Instructional Staff, but in effect, the Russians left the whole management in the hands of the British officers as this arrangement saved them trouble. In addition to their military training and physical drill, the students were taught to play games and to box. All the uniforms for the students and most of the equipment for the schools was provided by the British Military Mission and, in addition, at some of the schools the mission had to provide even the crockery for the messes. Whilst they lasted the schools performed most useful work, but the time during which they were in existence was all too short

for the instruction imparted to the students to permeate throughout the whole Siberian Army. In the old Russian Army there was much that made for estrangement between officers and men, officers gave scant attention to the comfort and care of their men. It was hoped by precept and example that these relations would be improved. The Russian Stavka (War Office) also interfered with the courses of training, ever impatient to send up reinforcements by dribblets, reinforcements too small in numbers to effect much, they curtailed the length of the courses and withdrew students from the schools before they had completed their training. Delays between courses were frequent, for the Russian General Staff usually omitted to issue orders for the assembling of a new course until the previous one had finished. Owing to the long distances students had to travel, this meant several weeks' gaps between courses.

In spite of the difficulties mentioned above, British officers and non-commissioned officers assisted in the training of 3,200 young Russian officers and 2,500 non-commissioned officers at these schools.

In addition to the assistance given at schools of instruction, a certain number of British officers and non-commissioned officers were attached to divisions in the back areas to assist in the training of battalions and companies.

Mention has been made of the Anglo-Russian regiment raised and trained at Ekaterinburg. It was originally intended to raise a brigade of two regiments each of four battalions. The more senior officers were to be British officers, the platoon commanders to be British non-commissioned officers and the rank and file, Russians. In addition it was intended to take over the 18-pounder field guns from the Canadian Contingent and with them to form an artillery brigade of two four gun batteries, officered by Russians, to form part of the Anglo-Russian Force. The more sanguine of the supporters of this scheme hoped that this *corps d'elite*, well trained and well led, would be available to be used as the spear-head in the advance or at the most threatened or vital point in the defence. Had this project been carried out as intended it is probable that hopes would have been justified, for the men were shaping very well at their training. It is possible also that a successful beginning would have induced the Russian authorities to expand the force still more and to include such units as a field company of engineers and a cyclist company.

In May 1919, a beginning was made with one regiment of 4 battalions, the regiment being commanded by a Lieut.-Colonel, and the 4 battalions by Majors, and the British personnel found from the mission and from the 1/9th Hampshire Regiment, who had been moved up to Ekaterinburg from Omsk. The rank and file were supplied by the Russian Divisions under training at Ekaterinburg. Each Russian Division was ordered to parade its quota of men from whom the British battalion commanders took their pick. As the Russian officers were jealous of this Anglo-Russian Unit, the divisional commanders paraded only their undersized and under developed men. To commence with, therefore, the Anglo-Russian Regiment compared most unfavourably with the local Russian regiments. But at the end of a few weeks of good food, physical training, games, healthy exercise and kind and considerate treatment, the recruits filled out and were a credit to their British instructors. Although clothed and equipped by the mission, the men were fed and paid by the Russians. A British staff drew the rations daily from the Russian Commissariat Department and supervised its distribution and cooking, whilst the pay was drawn and distributed by British officers.

When taken over from their Russian Divisions the recruits were marched through the streets of Ekaterinburg, with the band of the 1/9th Hampshire Regiment at their head, to the barracks of the latter regiment where they were fed and issued with their new clothing ; they were next taken to the baths of the American Mission, from which they emerged clean and dressed in their new uniforms. The issue of blankets caused a good deal of amusement as most of the recruits did not know to what use they were to be put, the ordinary Russian "Moujik" (peasant) in his home using only a sheepskin coat for a covering at night.

Russian barracks fall very far short of our ideas of hygienic and comfortable barracks. The men are crowded together and sleep in rows on wooden shelves 6 feet or so wide, running along the sides and middle of the barrack rooms ; these shelves are in two tiers and no mattresses or pillows are provided and there are no tables or chairs.

Training, once started, progressed apace. The hours were long and the work was hard, but the men were cheerful and willing and quick to learn. As time was short, every available hour was spent in training—games were compulsory and were considered as part of the

training. This was a novelty to them as the ordinary Russian troops never play games. English drill was taught with improvised Russian words of command.

Admiral Kolchak, General Gaida, and several of the Higher Commanders were most anxious that this venture should prove a success and did all in their power to help it. With the rank and file of the Russian Army, service in the unit was popular for it meant comparative comfort, humane treatment, full rations and full pay, in fact so popular was the regiment that numbers of men, belonging to the Russian units in Ekaterinburg, daily presented themselves at the headquarters of the British Military Mission asking to be transferred. The Russian officer class, however, and the Russian public generally, were much opposed to the scheme. The officers, because they considered it an imputation on their ability to train their own men, and the public, because they objected to seeing foreigners in command of their fellow country men. Intensive Bolshevik propaganda probably had a good deal to do with this unpopularity, for the Soviet leaders realised fully the value of such troops to the "White" army and they did their best to prevent its being a success. In time, feeling ran so high in the town that the Russians wearing the badge of the Anglo-Russian regiment (crossed Union Jack and Russian flag) were insulted and boycotted, but this no way affected the numbers who daily begged to be allowed to join the regiment.

Unfortunately, the Bolshevik advance on Ekaterinburg in July 1919 gave those who were opposed to the scheme their opportunity, and pressure was brought to bear on Kolchak, with the result that the regiment was broken up before it had completed its training and the men were sent off as drafts in small parties to the various divisions at the front.

The croakers amongst the Senior Russian officers of the Garrison prophesied that the Russian ranks of the Anglo-Russian regiment would shoot their British officers and British non-commissioned officers, but, instead, on the day when the unit was taken over by Russian officers the men cheered their British officers and carried them round the barrack square shoulder high.

After the break up of the Anglo-Russian regiment the British personnel and the 1/9th Hampshire Regiment were withdrawn to Omsk, leaving Ekaterinburg the night before the Bolsheviks entered that town.

The collecting of information by the mission was effected by various means, including the official communique issued from the Stavka at Omsk; the agency of Russian speaking British officers attached to formations at the front; the exchange of intelligence with the other Allied Missions, and the employment of spies. The intelligence was sifted, checked, and cabled periodically to England and India.

In the Autumn of 1919, as a result of the break up of the Anglo-Russian regiment and of the unfavourable situation at the front, the British Mission was gradually reduced in numbers. The two battalions were sent Home in September and November, *via* Canada, and the staff of the mission was fixed at 33 British officers and a few other ranks and placed under Brigadier-General J. M. Blair. By the end of January 1920, as we have seen, the situation in Siberia had suffered a complete change. Kolchak's Government had collapsed, the Siberian Army had ceased to exist, and the population of Eastern Siberia appeared to be opposed to further allied intervention. In February 1920 the British Government decided to withdraw both the military and railway missions and by the middle of May the withdrawal was complete.

The French Military Mission.

The French Mission established its headquarters at Omsk with branches at Vladivostok, Ekaterinburg, and at Chelyabinsk, at which latter place were stationed the Colonial Battalion and the battery of 12 guns. At Omsk the French Mission set up a wireless installation, which was in touch with the big station at the Eiffel Tower. By the courtesy of the French, the British Mission was able to get into touch with General Ironside at Archangel. The French supplied the only Allied aeroplanes co-operating with the Siberian Army, which were manned by their own pilots. They also supplied the Russians with a number of guns and heavy and light machine guns.

The Italian Military Mission.

Krasnoyarsk was selected as the headquarters of the Italian Military Mission where there were also the 1,600 Italian troops and a number of pack guns. They had representatives at Omsk and Vladivostok. During the early part of the summer of 1919, local Bolshevik bands were very active in the hilly tracts east of Krasnoyarsk, making constant raids on the railway to pull up portions of the line, derail, and attack trains, etc. A mixed column, consisting of Czecho-Slovaks

and Italians with Italian pack artillery, carried out a drive through the hills, inflicting heavy losses on the Bolsheviks and temporarily checking their activities.

The American Military Mission.

In addition to providing 8,500 men to assist in guarding the railway and in garrisoning the Vladivostok area, the United States sent out a large and extremely well equipped medical mission. They equipped and staffed several large military hospitals on the lines of communication at such places as Irkutsk, and also provided a number of up-to-date hospital trains to run between these base hospitals and the front. At many of the larger garrison towns they opened baths, where the Russian soldier could get a hot bath and have his clothes washed. The arrangements for these in the usual Russian type of barracks is most primitive and inadequate. In the spring and early summer of 1919, there was a severe epidemic of typhus in Siberia with which the Russians were unable to cope. The Americans, however, "got busy" and fitted up trains in which the "contacts" were bathed and their clothes washed and disinfected, each train was capable of dealing with 500 men daily. The trains were moved from place to place as required. It was largely due to the efforts of the Americans that the spread of the epidemic was stemmed.

The Japanese Military Mission.

The Japanese Military Mission and Japanese forces practically controlled and policed Vladivostok. At Chita also, which was the headquarters of Semenov, the Ataman of Cossacks, the Japanese had a large mission and representatives at most of the larger towns on the railway. The troops garrisoning Eastern Siberia and guarding a long stretch of the railway numbered 58,000. After the Russo-Japanese war the Russians, profiting by the lessons of that war, built a circle of very strong modern forts for the protection of Vladivostok against a possible Japanese landing. At the beginning of the Bolshevik trouble these forts had not been completed, but work was accelerated. By the irony of fate, the first troops to occupy the completed forts were the Japanese. At one time also, two of the Japanese cruisers in Vladivostok Harbour were ships they had captured from the Russians in the Russo-Japanese war.

In April 1918, before the conclusion of the Great War, the Supreme War Council had advocated the active intervention of Japan in Siberia as far westwards as Omsk or Chelyabinsk, but, as we have

seen, that help never materialised. It seems a great pity that in 1919, the Allied Powers found themselves unable to push a large force into Western Siberia and Eastern Russia. The presence of a well-trained, well-led, well-disciplined army at the front would have had a great effect on the morale of the Siberian "White" army and a corresponding demoralising effect on their opponents. An army 60,000 to 100,000 strong, actively assisting in the advance on Moscow and Petrograd would probably have resulted in the complete overthrow of the Soviet Regime and the establishment of a constitutional Government, willing to live at peace with the world and anxious only to restore Russia to prosperity. The world as a whole would be enjoying more peace now if the Allied Powers could have intervened in force in favour of the "White" Russians in 1919.

The Czecho-Slovaks.

The Czecho-Slovaks not only assisted at the front, but also provided 11,000 men for duty on the lines of communication, guarding the railway.

Chinese troops guarded the portion of the Trans-Siberian Railway lying within the limits of Manchuria, whilst the Serbians, Poles, Letts and Roumanians each guarded the portions allotted to them.

The French and Italians withdrew their missions towards the end of 1919, and the Americans theirs in the spring of 1920. The Czecho-Slovaks, Serbians, Poles, Letts and Roumanians were withdrawn and shipped to their own countries under arrangements made by the Allies, during the first half of 1920. The Japanese, however, remained on for some considerable time, keeping a hold over Eastern Siberia to prevent the spread of Bolshevism, eastwards.

V.—Causes of the Siberian Failure.

Admiral Kolchak being head of the Siberian Government, public opinion naturally tends to hold him responsible for the failure of his Army. Previously in the war he had distinguished himself in command of the Black Sea fleet but, although a good sailor, he was no soldier and should have left the command and direction of the army in the hands of someone more able to command than himself. He was patriotic to a degree and his great hope was to see Russia restored and at peace. Not a Russia of the Czars, nor yet a Soviet Russia, but a Russian Republic, in the Government of which, every peasant and labourer would have a voice through the medium of a properly elected

constituent Assembly. His aims and objects are clearly laid down in the terms of his proclamation to the Russian Nation (*vide* page 71)

Siberia, unlike European Russia, contains no large manufacturing towns and with the means at his disposal Kolchak was unable to develop the resources of the country. He was dependent very largely on overseas imports to supply the needs of his army and of the civil population. With only one line of railway on which to depend for the forward carriage of these imports, and with that one line not in full working order, the civil population and the army were, at times, unable to get even the bare necessities of life. This provided fruitful subject for Bolshevik propaganda.

Had Kolchak been more firm and had he trusted more in his own powers, it is quite possible that he would have been more successful. He had in the ranks of his Ministers and of the Headquarter Staff of his army, men who were inclined to be in sympathy with Bolshevik aims and aspirations; and he had others again, who would have been pleased to see the monarchy restored. Is it to be wondered at, that with such a mixed team, the "coach of state" did not follow a true course? Instead of ignoring the right and left parties and drawing on his own centre-party for his ministers and his leaders, he tried to placate all three parties; again, any of his trusted co-workers were unreliable and corrupt, ready to serve either "White" or "Red", according to whichever paid them best. The Allied representatives tried in vain to persuade all to sink their differences and to pull together to defeat their common enemy—the Bolsheviks.

Friction at times was so great that it resulted in divisions, corps, and even armies, failing to co-operate with and support one another. Cases were reported of Generals in command of Divisions, who should have been in the field commanding their formations, being found sitting in railway trains far from the scene of action with trucks full of pianos, sofas and other loot. Their absence from their divisions in the field being due partly to apathy and partly to pique.

Admiral Kolchak was seldom seen out in public, possibly because he feared assassination. On the one occasion on which he visited the British Military Mission camp 2 miles out of Omsk, the whole of the route was piquetted by troops and cleared of the public. He paid a visit to Ekaterinburg where he spoke at a public meeting and called

on the inhabitants to do their utmost to help the forces in the field. This appeal had but little effect and it was not until the Concert Party of the 1/9th Hampshire Regiment gave an entertainment at the local theatre and handed all the takings over to the Russian Red Cross, that the local inhabitants did anything themselves at all. In a word: the population of Siberia took but little interest in what was going on and would not bestir itself to help the Kolchak Government.

The civil population in Bolshevik Russia was far more helpful—the Soviet authorities had a gentle, persuasive way of compelling help! This difference in the attitude of the civil population was reflected in the respective armies. One felt it had the country behind it, whilst the other knew it had not.

It has often been a matter for speculation and wonder as to why the “Red” Army, on the whole, fought better than the “White”. There were many reasons for this. The Bolshevik Army contained a far larger proportion of officers and men of the old Russian Army than did the Siberian Army. The Bolshevik discipline was the stricter of the two. The “Reds” who had nothing to hope for from the Great Powers, could offer to their troops inducements which Kolchak, who looked for official recognition, could not. For instance, it was reported on good authority that when the “Red” Army was advancing eastwards on to Perm the Bolshevik Commander in the field informed the troops detailed for the attack on that town that, in the event of success, the town and all it contained would be handed over to them for a week and that no attempt would be made to restore law and order until the expiration of that week. With visions of unlimited loot before them it can well be imagined with what gusto they carried out the attack. Again, every “Red” Unit had in its ranks well-paid spies in the service of the Soviet Government who at once reported the waiverers and the disloyal. The punishment meted out to the delinquents was so severe—usually in the form of torture—that it acted as a wholesome deterrent to others.

In the summer of 1919 a Colonel, who had been in command of a “Red” Regiment, deserted to the “Whites”. In the course of a lecture given at Omsk he stated that, although in sympathy with the “Whites”, he had been fighting for the “Reds”, because the Soviet authorities had held his wife and family as hostages. On an occasion when his regiment had been unsuccessful in an attack on a bridge,

his son had been put to death as a punishment ; on a second occasion his daughter had been done to death. Later, he heard that his wife and the other members of his family had died of typhus, so with nothing further to hold him he had deserted to the side with whom he was in sympathy.

It must be remembered that not only did Bolshevik Russia contain a number of manufacturing towns which would supply the needs of the army and of the civil population, but also the Bolsheviks were able to draw on the large supplies of war stores and munitions sent to Russia by the Allied Powers in the early days of the Great War.

It is not within the scope of this article to describe in detail or comment on the operations which took place, but I should like to give two actual and typical incidents,—one of non-co-operation in the Back Areas and the other of an “unfortunate occurrence” in the front line,—which will serve to show the state of affairs with which Admiral Kolchak had to deal.

In July 1919, whilst the Siberian Northern Army was falling back before the Bolshevik advance, General Gaida wired to Omsk for ammunition. A train load was despatched at once. At a small wayside station *en route* the station master side-tracked the train and informed General Gaida by telegraph that he would release it only on receipt of a certain sum of money. As the Russian authorities were powerless to do anything Gaida appealed to our Mission for help ; an armed party of the 1/9th Hampshire Regiment was sent off by train to the station concerned and the station master induced to allow the ammunition to proceed without receiving the money he had demanded.

The second incident took place on the banks of the River Kama. When the Siberian Army in its retreat had withdrawn behind the river, the Higher Command directed that it should take up a position to deny the crossing to the enemy. The officers of one battalion in the line, thinking that the river in itself was an impassable obstacle, left the battalion to the Sergeant-Major to command and went off to a town a few miles in rear to attend a concert. The Sergeant-Major, in his turn, knowing that his officers would not be back till the next morning closed the battalion and billeted them in a neighbouring village, omitting even to post a sentry. The Bolsheviks, foreseeing that they would have to cross many rivers in the course of their advance, had brought up boats. They attempted crossings at many places. Some were repulsed and some succeeded. Unfortunately for the “Whites”,

one of the places at which the "Reds" attempted a crossing was in the sector allotted to this particular battalion, and having landed, they surrounded the village and captured the whole battalion, minus its officers, without firing a shot.

The feeling on both sides ran high during this Civil War in Russia. From the Bolshevik point of view it was a war of the Masses against the Classes, which added bitterness to the struggle. The "Moujik" had suffered for centuries from the autocracy of the Upper Classes and was only too glad to seize the opportunity offered him by the Bolsheviks of freeing himself from this tyranny, little realizing that in the end the tyranny of his own class—the Bolsheviks—was going to prove far more galling. Whereas Admiral Kolchak endeavoured to gain his object by appealing to the higher instincts in his men, the Bolsheviks found that with the utterly illiterate peasants and workers with whom they had to deal, it was more to their advantage to stir up all the most base of human instincts, until torture and destruction became a pleasure. There were many instances of torture without even the excuse of information being extorted.

A spy, who was a witness to the looting in Perm after its capture by the "Reds", stated that furniture, glass, crockery, pictures, etc., were thrown out of upper storey windows to crash to pieces on the pavement below and houses were burnt, all for sheer love of destruction, the "Reds" forgetting in their blind passion that they were destroying property in towns which they themselves intended to occupy permanently. Shops were entirely looted, jewellery and clothing were snatched off the persons of pedestrians and the inhabitants of the towns were subjected to many indignities. The Soviet Government, who had already fallen from grace in the eyes of the Great Powers, and who, at that time, were not seeking for official recognition, could afford to give their troops a free hand, knowing that it would be an incentive to them to fight hard and push on towards more loot in the larger towns of Siberia.

The "Whites", on the other hand, posed as the champions of law and order; the declared policy of their leaders was to bring peace and good-will to Russia and they were seeking for official recognition. In accordance with these avowed aims the leaders had, of necessity, to curb their men, to keep them from looting, to forbid torture or even ill-treatment of their prisoners. So that whilst the troops on the one

side were allowed, and even encouraged to behave like brute beasts, those on the other were continually held in check and were punished if they offended.

The Russian "Moujik", whose intellect and imagination are deadened by the down-trodden, hand-to-mouth existence which he leads and to whom a couple of roubles is riches, was naturally attracted far more by the prospect of immediate material gain in the form of authorised loot offered by the "Reds" than by the abstract gain offered by the "Whites" of a peaceful Russia of the future. Thus Admiral Kolchak's urgent appeal to their patriotism failed to arouse his troops or his so-called supporters amongst the civilian population.

With all this to contend against, is it to be wondered at that Admiral Kolchak failed? It would have required more than a Napoleon to have inspired the dull witted Moujiks and the apathetic Middle and Upper Classes with sufficient patriotism to fight for the love of their country, and not from motives of avarice or the fear of torture,—the inducements given by the Soviet.

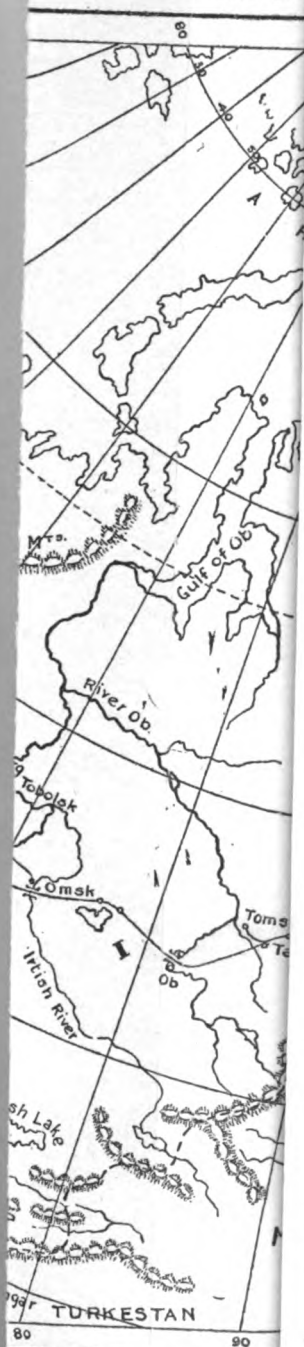
Kolchak's Proclamation.

"Citizens of Russia, the army which I lead continues with unshaken resolution its struggle for the liberation of Russia and draws nearer each day to its sacred goal. I solemnly declare at this fateful moment that I make war not on the Russian people but only on the criminal and mutinous organization of the Bolsheviks. Neither vengeance nor persecution is my object. Those who have perpetrated no atrocity and committed no crime have nothing to fear from me, and all who have been forced against their will to help the Bolsheviks in their work will receive from the Government a complete amnesty. I have assumed office in order to establish in the country, order, justice and freedom, and to give security and bread to the harassed and famine-stricken population. In every place through which our victorious armies pass it is my wish that justice be restored, that local administrations and legal rights be established, the law-abiding be protected and the law breakers punished. The office I have assumed is a heavy burden, and I have no intention of retaining it for a single day longer than the interests of the country demand. As soon as Bolshevism is finally crushed my first care will be to call for a General Election to a National Constituent Assembly. A commission is busily engaged at the present moment in the drafting of general regulations for the elections

which shall be conducted on the basis of universal suffrage. To this Constituent Assembly I shall hand over all my powers in order that it may decide on the future form of Government. I have already signed a law guaranteeing for the current year to all workers the produce of the land they have cultivated and sown. With the object of assisting in every way the small peasant holders, I intend in future enactments to transfer to them by due legal process the lands of the large landowners, who will in their turn be paid a suitable compensation. I am profoundly convinced that Russia will be prosperous and strong only when the many millions of Russian peasants are fully provided with land. I am equally convinced that the law should provide protection for the workman in order to secure their self organization on lines similar to those of the west. A special labour department is preparing data for future legislation on this subject. The path I have chosen calls for self-sacrifice, endurance and courage. Still, remember Russians all, that the days of our victory draws near to put an end to civil strife, and so invoking God's holy blessing, we will once more devote ourselves to peaceful and neighbourly work for the good of the Motherland.



"With the



line 31 December 191

" 30 April 1919

" 31 August 1919

MOBILIZATION AS IT AFFECTS THE REGIMENTAL OFFICER.

By

CAPTAIN G. L. MOLD, 3/15th PUNJAB REGIMENT.

“Success will depend as much upon the arrangements for rapid mobilization and concentration as upon the skill with which the operations are conducted ” (F. S. R. Vol. II, 5 (6)).

In the opening phases of a campaign it will invariably be the aim of every commander to obtain and hold the initiative. Preparedness for war is one of the most important factors on which the acquisition of this powerful weapon depends. It is, therefore, of vital importance that the mobilization machinery of an army should be maintained in peace, complete in all its parts and in perfect running order, so that, on the pressing of a button, *i.e.*, the order to mobilize, the whole plant will be set in motion without the slightest hitch or hindrance. It is only by such preparatory measures that the concentration of an army in the theatre of operations can be accomplished in sufficient time to make it possible for its commander to deny the initiative to the enemy.

History is rich in examples that illustrate the truth of this axiom ; the most noteworthy being, perhaps, the Franco-German campaign of 1870. It will be remembered that the Germans, having realised that war with France was merely a question of time, had devoted all their energies to the drawing up, with infinite care and thoroughness, plans for the rapid mobilization of their forces. They were prepared on a territorial basis for both personnel and material and were complete to the minutest detail. Every man knew the position he had to fill when called to the colours and all arrangements for animals, war equipment, supplies and their transport had been made.

The French system, however, was just the reverse. There was no localization of units so that it was quite possible for a reservist, living in the south of France, having to join a unit mobilizing in the north, whilst his equipment, was, perhaps, stored in a depot miles distant from either his home or reporting centre. With regard to supplies and material, there was a sufficiency of both but too much centralization and absence of organization made rapid distribution impossible, so that, on the outbreak of hostilities, confusion and congestion were the inevitable result. As was only to be expected, the

Germans immediately acquired and held the initiative and, within three weeks of the first encounter, the French army had been separated into two isolated columns, both in full retreat.

The mobilization and concentration in Flanders of our indomitable Expeditionary Force in 1914 provides one of the finest examples on record of the results that can be obtained from the efficient and smooth running of an army's mobilization machinery. Here again its success was undoubtedly due to the forethought that provided for the most meticulous preparations being made in peace to ensure that its every part was complete and ever ready to play the rôle, however insignificant, assigned to it on the outbreak of war.

"The commander holding the initiative will make every effort to prevent the operations becoming stabilized, and, since existing and potential mechanical developments increase the possibility of carrying out offensive operations of a rapid and highly mobile nature, such operations are to be expected at the opening of a campaign" (F. S. R. Vol. II, 8 (1)).

Such a conclusion, and none will deny the truth of it, must assuredly make it all the more imperative that no efforts should be spared to render practicable an even more rapid mobilization of our forces than was the case in 1914.

Of what does this mobilization machinery consist and how can the regimental officer assist towards its preparedness?

"On general mobilization, all units for which a war establishment exists will mobilize" (Mob. Regs., India, Sec. 1 (4)).

Practically every unit in the army, therefore, forms a part of this comprehensive machine and the unit commanders, who are the mechanics, with their subordinate commanders as assistants, are responsible for the fashioning and perfecting of the individual parts.

With what equipment are unit commanders provided for this task?

"Mobilization Regulations are issued with a view to ensuring that mobilization proceeds automatically" (Mob. Regs., India, Sec. V, 27).

The mobilization of an army being an extremely complicated and involved process, one of the primary essentials is uniformity of method. In order, therefore, that every unit shall set about its task of preparation in peace time on exactly the same lines, without the omission of the smallest necessary detail, Mobilization Regulations

provides a comprehensive but concise method of procedure to be followed by every unit in the drawing up of its mobilization scheme.

“The object of mobilization schemes is to ensure that, so far as can be foreseen, every detail connected with the process of change from a peace to war footing has been thought out in peace.” (Mob. Regs., India, Sec. II, 9).

And again “The mobilization scheme of a unit is to contain all information and documents to enable the process of mobilization to be carried out with the minimum amount of labour and without reference to regulations, etc., on mobilization. All documents should be completed in peace so as to require, on mobilization, the addition only of numbers, dates, places and other details which cannot be determined in peace.” (Mob. Regs., India, Appendix B (1)).

The general arrangements to be followed in the compilation of unit mobilization schemes is laid down in Appendix B of Mobilization Regulations, India.

The unit commander, however, having drawn up his scheme in outline in accordance with these instructions, now requires a mass of detail regarding personnel, animals, war outfit, etc., all peculiar to his own unit, without which he is unable to fill in or complete the various sections, appendices and annexures enumerated in this outline. In order to avoid the necessity of consulting endless books and manuals, practically all the detailed information required has been collected, collated and condensed in a separate manual for each unit.

A Field Service Manual has been, or will be, published for every unit for which a war establishment exists. Its scope is described in the general notes at the beginning of each book as follows: “This manual is intended to furnish the unit and sub-unit commanders concerned with all information in a compendious form regarding war establishments, war outfit, rations, forage and transport loads required by them on mobilization and in the field and the authority for indenting for the same.”

The compilation of unit mobilization schemes, which at the outset usually strikes the regimental officer as being a most formidable task, is now perfectly straightforward and should present no difficulty whatsoever. Mobilization Regulations provides the outline and summary of contents for the scheme, whilst the Field Service

Manual of the unit concerned contains practically all the essential details required for its completion.

It is suggested that the value and importance of the Field Service Manual (read, of course, in conjunction with Mobilization Regulations) is generally not fully realised. It should be the regimental officer's mobilization bible. Without it, he is helpless ; for, unlike the pre-war manuals, it now constitutes the sole authority for the issue on or after mobilization of all the following items :—

- (i) Arms and ammunition.
- (ii) Personal equipment.
- (iii) Clothing and necessities.
- (iv) Unit equipment, including medical and veterinary equipment.
- (v) Books, forms and stationery.
- (vi) Rations and forage.

Let us take the example of a British or Indian infantry battalion and attempt to illustrate briefly how various sections of the Field Service Manual can be applied to the preparation of the battalion mobilization scheme.

It will suffice to consider, say, four of the most important sections to be included in the summary portion of the scheme, *vide* Appendix B to Mobilization Regulations.

- (a) Personnel.
- (b) War outfit.
- (c) Supplies.
- (d) Transport.

(a) *Personnel*.—This is chiefly the concern of the C. O. and his Adjutant. Peace and war establishments are found in sections II and III of the F. S. M. together with a table showing how the battalion passes from a peace to war establishment.

From these, the adjutant can prepare for his C. O. particulars as to—

- (i) Numbers of additional personnel required to join the battalion in order to complete to war establishment.
- (ii) Details as to all ranks to be despatched to the depot or training battalion.
- (iii) Numbers of each rank to be promoted.
- (iv) Clerks to be despatched to 2nd echelon.

(b) *War Outfit*.—Section VII of the manual is the sole authority for all war equipment. There, the quartermaster and company commanders will find tables giving a complete list of all personal equipment, clothing and necessities and unit equipment which can be taken by the unit on service. The tables are divided into columns showing whether each item is peace or mobilization equipment and indents for all articles not on unit charge can then be prepared therefrom. Similarly, lists of all stores, equipment, etc., held on charge in peace, which will not accompany the unit, can be compiled by the simple process of elimination and arrangements and orders for their disposal drawn up accordingly.

Section IV-8 provides the adjutant with a complete list of all books, forms, stationery and office equipment required for the mobilization yakdans and their source of supply.

(c) *Supplies*.—All the requisite information in connection with the feeding of all ranks and animals is condensed into tabular form in section V of the manual, such as —

- (i) The various scales of rations and forage that are admissible on field service to all ranks, followers and animals.
- (ii) Chain of supply of rations in the field.
- (iii) Scales of equivalents liable to be issued in substitution for the various items of food.
- (iv) Weights of each scale of ration per man per day and also per battalion per day.
- (v) Contents of the emergency ration ; how and where drawn.

(d) *Transport*.—The quartermaster first requires to know details as to what transport will be allotted to his battalion and from what source the extra regimental mules and vehicles will be supplied. These he will find from war establishment tables (section III) and general notes.

From sections V and VII he has been able to calculate the total weight of war outfit, etc., to be carried and now, by referring to section VI of the manual, he can write his orders concerning the distribution and loading of all pack mules and A. T. carts. For further detailed information as to loads, section IV will be of much assistance to both himself and all officers. Here they will find tables giving the allotment,

weight and exact method of loading between the man and transport echelons, of—

- (i) Ammunition.
- (ii) Grenades and signal cartridges.
- (iii) Signalling equipment.
- (iv) Vickers gun equipment.
- (v) Lewis gun equipment.
- (vi) Field kits of all ranks.

Particulars as to tentage allowed will also be found in this section.

Thus it will be seen that in the case of an infantry battalion the greater part of all indents, orders, instructions, and documents, required for the diary, annexures and appendices of the battalion mobilization scheme can be prepared in a very short time from the material available in the Field Service Manual and Mobilization Regulations. The same applies to all other units.

Field Service Manuals do not include any information concerning pay and accounts (which is shown in Mobilization Regulations). However, although there is much detailed work involved in mobilization schemes in this connection, it should present no difficulty as it is entirely straightforward routine work with which the unit accountant and clerks should be quite capable of dealing under suitable supervision.

In conclusion, it is desired to emphasize the fact that a mobilization scheme, once completed, must not be forthwith consigned, with a sigh of relief, to the unit mobilization box and there allowed to remain until a few days before the G. O. C's next annual inspection. It must be kept up to date and all officers made thoroughly conversant with everything in it that affects them. There is no better method of testing the efficacy of the scheme than by putting it, as far as possible, into actual practice in the form of an exercise; an excellent form of training for the rains. In this way only, can faults and omissions be discovered and improvements effected. Moreover, the unit commander can thus assure himself that his part, at least, of the Army's mobilization machinery is ready to perform the rôle assigned to it the moment it is required.

CHEMICAL WARFARE.

By

COLONEL A. H. C. KEARSEY, D.S.O., O.B.E.

It is most important at this present time when so much thought is being given to experiments in improving the mobility and fire power of our army that scientific and chemical experiments should at the same time be progressively carried out in the workshop and in the field.

No powerful weapon of war has ever been abandoned until it has been replaced by a more dangerous one. In the late war toxic gas was one of the most powerful weapons. It will revolutionize war just as the introduction of gunpowder did, and as petrol power is gradually changing it to-day.

Nearly a hundred years ago Napoleon said "In war, fire is everything, the rest is of small account."

To-day we do realise the necessity of bringing to bear as intensive fire as possible with the fewest number of individuals and we realise the necessity of protecting those individuals in armoured motor vehicles which will bring them as safely and as quickly as possible to the decisive place. We realise that, owing to the nature of an enemy's fire to-day we must save casualties in order to concentrate superior numbers against an enemy. The American experts on chemical warfare tell us that during the retreat of the B. E. F. in France in March 1918 the proportion of gas masks to steel helmets missing was four helmets to every one mask. This proved that the soldiers considered that gas was a more dangerous weapon than the shell or the bullet at that time. Are we then carefully training for protection against the gas weapon, and are we preparing to make full use of it when possible? Nations will not give up the use of gas for the reason that it is not humane.

Daggers, knives, bayonets, bullets and shell splinters make jagged wounds and give painful deaths. Gas may produce less casualties in a war, because it may in the earliest encounters be so deadly that an unready and unscientific enemy may be forced to give up the struggle in order to avoid extermination.

Gas as a weapon is only the result of natural evolution and progress in armament from the days when David used a sling as a propeller for his missiles. Armoured knights dominated the battlefield for centuries until they were beaten by archers who in turn were routed by riflemen.

Gunpowder propelled solid iron and steel further, and at greater speed than a javelin, dagger, or arrow could be thrown. Then the area in which an enemy could be put out of action was increased by filling the shells with gas, so as to make them burst and scatter shell splinters and bullets. In 1915 the Germans made their first gas attack by propelling a cloud of chlorine from cylinders installed in their trenches. All those in the forward area over whom it passed became casualties.

Then in December 1915 they mixed 25 per cent. of phosgene with it, and they were able to liberate at the same time tear gases under pressure from cylinders. Then shells, mortars and grenades were filled with other poisonous gases. These further varieties were the vomiting, the sneezing and the deadly and blistering mustard gas.

By the use of these developments our casualties after their attacks on the nights 11th and 12th July were approximately 20,000 in about six weeks. In April 1918 the Germans by the use of mustard gas shells took Armentières without loss of life on their own side. What will be the evolution of this weapon it is difficult to foresee, but it is not difficult to predict what will happen to a nation that does not fully develop this weapon and does not sufficiently consider how we can maintain our mobility in view of its use by an enemy, and how we can fully exploit its use by reducing an enemy's fighting strength.

Plans for battles must in future include the use of gas for every arm in the proper quantities and of a suitable type in every phase of operations.

Training and preparation are necessary for all ranks in order to gain success in war. Frederick the Great was helped to win his battles by superior fire power. His thorough training enabled his men to load and fire twice as fast as his enemies could. Napoleon was helped by the use of his massed artillery and by his preparation for maintaining ammunition supplies.

In 1866 the result of the six weeks' war was largely due to the Prussians breech loading gun, which could be loaded more quickly than the Austrians' Lorenz rifled muzzle-loader.

In 1914 the Germans gained the initial advantage of surprise by the combination of their mobile 42 cm. siege howitzers with aeroplane observation of fire. Thus the frontier fortresses did not appreciably

delay their forward enveloping movement through Belgium and Northern France.

In 1916 Russia gave way before the Germans' continuous and powerful artillery bombardment. In 1914, if the Allies had had available the same amount of guns and artillery ammunition as was used against the Russians at the Dunajec, who can question that they would have gained a rapid victory. Had the Germans kept their secret of the use of gas and used it in sufficient quantities at decisive places with available reserves at hand to exploit success they would at that time have gained a decisive result.

It must be remembered that chemicals may be used in many forms. They may be driven off by heat from projectors or containers or they may be pulverized by high explosive in every variety of shell or grenade. When the wind is favourable we must be prepared for attacks, and we should have a proportion of officers sufficiently trained to appreciate the danger and to give the signal so that troops can defend themselves in time. In the late war it was necessary to adjust gas masks in six seconds after the gas alarm sounded. Trained experts could detect by a sense of smell the presence of gas in the air in time to give a warning although the Germans were able to mask their mustard gas with diphosgene and sneezing gas. We must expect in the future that gases will have a more rapid effect and will be less easily detected than those in use in the late war. It must be remembered that they can be used as effectively by night as well as by day. There can never, therefore, be any relaxation in vigilance in watching to detect the presence of gas in the air. Commanders and staffs must have in their minds the possibility of attacks and the necessity of manœuvring to gain a position from which to deliver an attack with a favourable wind.

The engineer, the scientist, and chemist should combine to devise the best projectors, and the best methods of transportation, also how gases may be made as toxic as possible, may be manufactured in bulk, may be easily compressible to a liquid and yet be volatilized, and how they should be made stable against moisture with a higher density than air.

In the field, in addition, we require to practise the process of degassing and decontamination, and of working with gas masks, as they limit a man's mobility, decrease his vision and increase his breathing resistance.

Unless commanders and their staffs consider these points there will be miscalculations in the important factors of time and space.

General Fries and Major West, the American experts in chemical warfare state in their very interesting book on this subject that "chemical warfare has come to stay and just in proportion as the United States gives chemical warfare its proper place in its military establishment, just in that proportion will the United States be ready to meet any or all comers in the future, for the United States has incomparable resources in the shape of crude materials—salt, sulphur and the like—that are necessary in the manufacture of gases. If the training of the army in chemical warfare be thorough and extensive the United States will have more than an equal chance with any other nation or combination of nations in future wars."

EDUCATE THE SOLDIER.

By

CAPTAIN G. E. HAMILL, 1/16TH PUNJAB REGIMENT.

1. *Subject first brought to notice of writer.*

“Education, lots of Education.

That’s the way to spend the money of the Nation.”

So sang four hundred Royal Scots to the old tune of :—

“Mary, Mary dainty little Mary.”

The scene was the Regimental Theatre. The year 1920. The subject of a topical song necessarily deals with the topic of the day which is uppermost in each mind. The gospel of education was being preached with vigour at this particular period in each unit. Rank and file, and even officers, regarded the movement with suspicion. Rumours of future stumbling-blocks in the form of First, Second, Third-class Certificate examinations were rife. The batons in the haversacks of many potential field-marshal rapidly became ethereal. Young soldiers regretted having left home. Old soldiers longed for another war—particularly one to put an end to education. The Officers Mess speculated as to whether ‘Caps and Gowns—Officers for the use of’ would be a free issue.

This was seven years ago. To-day the education of the soldier is part of his normal daily programme. The Theory of Indices (to exaggerate) is as well known in the barrack-room, as that of rifle fire. The education of the soldier is being conducted on lines calculated to develop those qualities, which will enable him to perform his present duties with skill, and adapt himself readily to future circumstances whether during his military or eventual civil career.

2. *Education of the soldier seriously taken in hand since the war.*

Since the war, great stress has been laid on the education of the soldier. It has been realized, that the soldier of to-day should be something more than an individual trained to fight. It is not sufficient, merely to make him a skilled infantry man or gunner, and to leave him to his own devices. He has, in addition, to be prepared in some way, for his return to civil life.

It is not my purpose to show *how* this is being done, but to bring out the importance and necessity of its *having* to be done. Competition in civil life was never so keen as it is to-day. Civil life is a battle

of brains. The trained mind succeeds—the untrained mind goes under. The soldier eventually becomes the civilian in peace. In war, the civilian becomes a soldier. These are some of the facts the appreciation of which has brought about the present satisfactory system of army education and instruction.

3. *Causes which have led up to new policy.*

Before discussing the causes that have brought about the new policy concerning education, it is important to establish clearly what is meant by education. If a private soldier were asked to define the term, he would probably mumble something about ‘blankety-blank’ schools, and ‘unmentionable’ certificates. His comments on the school staff might possibly be unprintable.

Education according to Nuttall, is the training that goes to cultivate the powers and form the character. Where the term is mentioned herein, this is the definition behind it.

(b). *Pre-war conditions.*

Few men joined the army before the war with any definite idea of making it a career. In many cases the cause of enlistment was due to the acuteness of the housing, clothing, and feeding problem at home. The army provided these necessities, also a certain amount of pay, and the possibility of a trip to “furrin parts.” The educational qualifications of the average recruit were generally negligible. The recruit became a trained soldier after 12 months. Thereafter he generally rested on his laurels until he became time-expired and went to the reserve. If he happened to be ambitious, he might perhaps attend the Regimental School. The product at the end of his service was generally a well set up individual of good appearance and endowed with physical fitness.

(c). *Return to civil life.*

He returned to civil life a skilled soldier, with perhaps a smattering of education, but fit only for employment of an unskilled kind. Such was the end of his career unless the war, for which he had been specially trained, broke out. Then he worthily maintained the high traditions of the Service.

(d). *Guiding experience of the period.*

Our last experience of war had been South Africa. Our obligations to the soldier, and the standards set up for him to reach, were regulated by the experience of South Africa. What vision existed

of 'The War of the Future' about which so much was being written and conjectured, was so dim and as yet so inconceivable, as to bring about no change of policy towards the all important question of training the soldier to be, not only a skilled fighter, but ultimately a useful citizen.

(e). 1914—*Outbreak of War.*

Every schoolboy knows the history of the period 1914-18. By the end of 1914 the original British Expeditionary Force had been more or less wiped out. The late Lord Kitchener spoke of vast civilian armies. These armies were brought into existence, trained intensively and flung into the firing line. Then came the realization that the war would be one, not of months, but of years. The resources of the Empire in personnel and material would be taxed to the full. This was war beyond conception. The professional soldier had gone. The civilian had taken his place.

(f). *Civilian Armies.*

How would these civilian armies acquit themselves? That they acquitted themselves creditably is now history. Training they lacked, yet they were trained and thrown into the conflict in a short space of time.

(g). *New type of recruit.*

The new type of recruit was necessarily of a high standard of intelligence and education. He assimilated his training rapidly. He quickly made use of the experience gained on Active Service. He adapted himself readily to each new set of circumstances. His *moral* was of a high order.

(h). *Development of weapons of destruction, etc.*

With the progress of war, inventive genius produced new weapons of destruction. Air warfare was conducted on a vast scale. Tanks made their appearance. The mass of artillery employed was enormous. Mechanization of the services became more and more a necessity. Wireless became an important means of communication. In short, a huge organization, an enormous war machine had gradually come into being. The highest skill and intelligence were necessary to ensure the smooth working of its many parts. Special and technical knowledge were in many cases indispensable. All these qualities were forthcoming—and the war eventually came to an end.

(i). *After the War.*

The termination of the war brought demobilization and breaking up of the enormous organization that had been evolved. The problem of the reorganization of the Regular Army had to be undertaken in the light of experience gained in the war that had passed.

4. *Facts deducible from experiences of the War.*

The standing army must necessarily be a small one. What is lacking in numbers must be compensated for by a high standard of efficiency. This efficiency will depend on whether the lessons of the late war have been learnt, and whether the habit of looking into the future is cultivated. Has the experience of the war brought about any noticeable change in policy in regard to the soldiers? It is common knowledge that the status of the regular soldier to-day is much higher than in pre-war days. It is interesting therefore to speculate as to how this change has come about.

(b). *Regular Army vanishes.*

The Regular Army disappears and always will disappear during the opening phases of any war between first-class nations. The war as it develops will be carried on by civilian armies.

(c). *Civilian becomes a soldier.*

Civilian armies, because of a generally high standard of intelligence and education were able, after a comparatively short period of intensive training to take their place in the firing line. They quickly assimilated knowledge and adapted themselves readily to new conditions. They profited quickly by experience.

In any great war of the future the nature of the opening and of the later phases will undoubtedly be as unfamiliar as those of the late war. It can be assumed that the civilian armies will, as in the late war, fulfil their rôle satisfactorily.

(d). *Peace Standard Regular Army.*

The success with which the Regular Army plays its part will depend on the standard of its peace training. This standard will depend on whether the lessons of the war have been grasped and whether there is vision, accurate enough to appreciate a future situation in the world of invention, science, commerce, etc.

(e). *Influence of time-expired soldier.*

The character of future civilian armies will be influenced in no small measure by the type of soldier returning each year to civil life—"a little leaven leaveneth the whole lot".

(f). *Greater efficiency required from the soldier.*

The most important lesson, however, to be learnt from the war, and the lesson which should determine policy in relation to the training of the soldier is, that greater skill and a higher standard of education and intelligence, are required from the individual soldier. New weapons, new inventions, new methods of destruction are constantly appearing on the scene. In a future war multiplication of these will be considerable. The soldier is required to handle these new weapons and adapt himself to new methods at a moment's notice.

Any individual soldier may find himself in a position of responsibility in war, where the success of the enterprise in hand, and the safety of the lives of many, may depend entirely on his ability to make a sound decision at the right moment.

5. *What form should Peace training take?*

The question to be decided is: what form of training in peace will contribute to the achievement of these objects? What qualities of mind should be developed to ensure the assimilation of sound military knowledge, the application of continual thought, and the will to act in war in accordance with the principles taught in peace?

The above refers to the training of the soldier for war. It must be apparent, however, that an organization that enlists the services of thousands of young men, educated up to a point but as yet untrained in any definite direction, is failing in an important duty if it merely converts them into trained fighters, and launches them into civil life, at a comparatively early age, without having prepared them in any way, to compete with some hope of success.

6. *Obligation of the State and objects to be kept in view.*

The state is therefore under an obligation to carry on the school education of the young soldier. The realization of this defines clearly the objects to be kept in view, namely:—

- (i). Train the soldier for war in the light of the experience of the late war.
- (ii). Carry on concurrently the education of the soldier on such lines that it will contribute to his efficiency *as a soldier*, and at the same time develop those mental, physical and moral qualities which will fit him for his return to civil life.

7. *Two objects inter-dependent.*

This at first sight may appear to be an ambitious undertaking. It is an ideal of the highest quality. It is capable of achievement—but only if the two objects be regarded as complementary. The danger of the school education being regarded as something unconnected with his military education is to be guarded against. As long as educational methods are employed in *all* instruction the danger will not arise. It is worthy of note how methods of instruction in military subjects have improved in recent years. Teaching has taken the place of lecturing and ‘telling.’

8. *Conditions in the service created by new policy.*

The soldier of to-day who desires not only to succeed as a soldier, but to prepare himself against the day of his return to civil life, has every facility at his disposal for so doing, each unit having a qualified educational staff.

Vocational training, although an expensive item to provide for, is arranged to suit the requirements of men due to leave the service.

In short, the excellent education in military subjects, combined with that in more peaceful subjects which a man receives during his period of service with the colours, proves, that the period, far from being unproductive, as it was regarded in the past, may and can be, the means of setting him out on a successful career either in civil life, or in the service itself should he remain.

9. *Conclusion.*

To conclude, stress has been laid on the education of the soldier because it has been realized that—

- (i). Greater efficiency in military training in peace and greater skill in war are possible when the personnel are educated.
- (ii). Education fits the soldier to take his place in civil life as an efficient citizen.
- (iii). Education of the soldier ensures that a more efficient individual returns to the service in time of war.
- (iv). The fact that the education of the soldier is carried on efficiently has made the army more attractive as a career.
- (v). The effect of numbers of educated soldiers returning to civil life, automatically raises the standard of the community into which they enter.

THE EAST INDIA COMPANY'S WAR MEDALS.

By

LIEUT.-COLONEL J. ALBAN WILSON, D.S.O., I.A.

From a historical or a collector's point of view, the silver medal, stated by many authorities to have been issued to Indian troops for quelling a mutiny of the Europeans at Monghyr in 1766, may be discarded as a military decoration, firstly, because there was no armed mutiny, secondly, because the Company would not be likely to perpetuate the misbehaviour of their white officers and lastly because there is no official record of such an issue. The design, a figure of Minerva with her owl and the motto "Non nisi digno" seems to indicate a scholastic rather than a military achievement, moreover, the medal in no way resembles any of those the Company issued later, so it may be assumed that the first actual war medal they gave was that for services in Guzerat and the Carnatic, between 1778 and 1784. This was issued in two sizes, 1·6 and 1½ inch in diameter in gold for native officers and in silver for N. C. Os. and men. It had roughly milled edges. The obverse shows a figure of Britannia, seated on a trophy of arms and holding out a wreath towards a fortress over which the British flag is flying. The inscription on the reverse is in Persian, saying the decoration was given for "good service and intrepid valour." It further describes it as a "coin" and its recipients as "lion hearted Englishmen", which seems inappropriate as no Englishmen received it. It resembled a coin in its milled edges and in having no means of suspension.

Next came a medal for the earlier operations against Tippoo Sultan, issued in gold, 1·7 inch diameter to native officers and in silver 1½ inch diameter to other ranks. Obverse, a sepoy with the British flag in his right hand and the enemy one, reversed, in his left, a fort, possibly representing Seringapatam, in the background. Reverse—a wreath surrounding the words "For Service in Mysore, 1791-1792," outside the wreath the same in Persian. It had a loop for suspension. Owing to its being cast and not struck, this medal is often forged for the deception of collectors. The rarest of this series is the medal, two inches wide, "For Services on the Island of Ceylon, 1795-6", for only two were given in gold and 121 in silver to natives of the Bengal Artillery only, the other troops engaged got nothing. The obverse has the above inscription in English, the reverse its equivalent in Persian. No doubt a few more were struck than were actually

required at the time, but not enough to account for the frequency of this medal in collections. Two medals were given for the capture of Seringapatam in 1799, the die of the first was made in England, and from it were struck 30 gold, 185 silver gilt, 850 silver, 5,000 bronze and 45,000 tin medals; the gold and silver ones were for British and Native Officers, the bronze for sergeants and havildars and the tin for all other ranks. This was the first issue of a medal in India to British Officers. The obverse shows the storming of the fort at noon, with a Persian description beneath it, the reverse the British lion fighting with a tiger under Tippoo's banner, emblazoned "The conquering tiger of God" in Persian. It is strange that one never sees the tin medal in a group, for many of the men of the artillery, the 74th and the 94th Foot, who lived to be decorated with the Army of India medal, issued in 1850 for the earlier campaigns not recognised by the Company at the time, must have received that for Seringapatam.

The Bengal artillery and five Bengal infantry battalions were recommended on return to their own Presidency for medals, so a die, copied from the English one, was prepared in Calcutta and from it were made 96 gold and 3,000 silver medals for natives, officers and men, which put the latter on a par with junior officers of the King's troops. These two patterns are easily distinguishable from one another. Sixteen gold and 2,197 silver medals were given to native troops for Egypt 1801. Here again the Bengal officers scored, for they alone got gold medals, those of the Bombay Army only receiving silver ones, like their men. This medal, 1.9 inch diameter, has on the obverse, a sepoy holding the British flag with a camp behind him. A Persian inscription is in the exergue. The reverse shows a ship in full sail, with Pyramids in the background, the date in Roman characters below.

It is interesting to note that the medals for both Egypt and Ceylon were first made from the Seringapatam die, for no one apparently realized that this design was inappropriate, till the mistake had occurred. A medal or badge, to be worn on the head dress, was sanctioned for issue to all native ranks present at Assaye, 1803. It was made in the shape of an elephant, of which 179 were given to native officers in silver, and 7,269 in copper to other ranks. They were ordered from the Army Clothing Department, but were issued by the Madras mint.

The writer has never seen or heard of one in any collection.

The next medal was given for the capture of the islands of Rodrigues, Bourbon and Mauritius from the French in 1809. It was 1·9 inch diameter and 45 gold and 2,156 silver ones were given to native ranks only. On the obverse is a sepoy, standing beside a gun. He is trampling on the French Eagle and waving the Union Jack, behind are ships in harbour. Reverse, in English "Rodrigues Bourbon and Isle of France" with date surrounding a wreath, which encloses a Persian inscription.

Java 1811. This medal, the same size as the last, was struck in gold and silver, 133 for native officers and 6,519 for other ranks. Obverse, Indian troops storming a fort, with the word, "Cornelis" above it. Reverse "Java conquered. XXVI Aug. MDCCCXI" surrounding a Persian inscription.

The dies of all these medals which were made in India were evidently designed by Indian artists, for it will be seen that, in the Java and the Seringapatam medals, the flags or colours are effected by a wind, which blows in different directions at the same time.

With the issue of the medal for Nepal 1814-16, previous custom was departed from, for it was given in silver only, to all native officers, who entered the hills, and to such of other ranks who were recommended for zeal or gallantry, so it is a pity that no record exists of the number issued. This medal was made two inches diameter. The obverse is a rough design of stockaded hills, a cannon and bayonets with a colour in the foreground.

A clip was issued for this as well as for the medals for Egypt, Ceylon, Mauritius and Java and as the clips were all of the same weight, one may presume they were all the same pattern, the only difference being in the metal of which they were made, though they vary very much in specimens seen in collections. A native-added clip on an original medal is easily recognised.

The medal for Burma, Assam and Arracan was struck in gold and silver for all native ranks, who were in action. This was designed in England and is the best of any of those already described except that for Seringapatam, the style of which it much resembles. It is 1½ inch diameter and has a steel clip and ribbon like that given for Waterloo, which was the first ribbon authorised for service in India, red with narrow blue border. The former medals were usually slung on a yellow silk cord and were worn round the neck.

The obverse shows the British lion, with the Union Jack flying over him, making the Burmese elephant salam and droop his flag, a Persian inscription is in the exergue. The reverse has a view of the Shwe Dagon pagoda in Rangoon, with troops storming it and a steam-boat shelling it from the river, a Persian inscription is in the exergue. Over 800 of these medals were struck in gold and 30,000 in silver for the native troops, the British General in command also received a gold one, but no other British officer. No regular troops were employed in suppressing the rebellion in Coorg in 1837, but a medal was struck, two inches in diameter, and given in four different values in gold to forty-four chiefs and two hundred in silver to other native leaders who remained loyal. It is possible that the gold ones of the lowest value were only plated, for the writer once had one which showed distinct pieces of gold plate on it. On the obverse is an armed Coorg warrior in fighting attitude, surrounded by an inscription in Canarese. On the reverse is a trophy of Coorg arms, surrounded by a wreath and English inscription, "For distinguished conduct and loyalty to the British Government. Coorg April 1837."

It is fitted with a round suspension ring, put on at right angles to the edge. None of these medals had the recipients' names on them. The next medal given by the Company was for the capture of Ghuznee in 1839 and as it and all subsequent issues were made to all ranks alike, they are much better known, so this article may now come to an end.

WATERLOO—A LECTURE.

By

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1. The subject of this lecture has been chosen for three reasons :—
 - (a) Waterloo is one of the alternative campaigns which may be taken at the April 1928 Promotion Examination.
 - (b) It is also one of the campaigns for study laid down in the new syllabus for the Staff College Entrance Examination to be held in 1928.
 - (c) The subject recommended for study in Army Orders for 1927 by the C. I. G. S. is “ The Life of the first Duke of Wellington ”.
2. *Scope and Object of Lecture.*

Most authorities agree that Waterloo was lost by Napoleon and won by the Allies not mainly on account of the tactical movements on the battlefield itself, but mainly on account of what happened in the course of the advance of the French Army thereto. For this reason, and for the additional reason that it is quite impossible to deal in any detail in the course of one lecture with a campaign of the magnitude of Waterloo, my remarks will be confined chiefly to this preliminary phase, and any except very general comments on the actual tactics used by the opposing commanders at the battles of Ligny, Quatre Bras and Waterloo will be omitted.

The main object of the lecture is merely to provide the necessary groundwork on which the more detailed knowledge required for examination purposes can be built.

To those who have no further interest in examinations, or to those who have a feeling that the study of military history from the point of view of campaigns which happened over 100 years ago occupies time which might be more profitably spent, I commend the following extract from an article on tactics in the *Encyclopædia Britannica*. I make no apology for its length :—

“ When due allowance is made for invention surely no campaign is better worth studying than this of 1815. Fought out between two great captains within the space of a few days and over a few miles of country it forms the very epitome of war in all its branches. The doubt up to the last moment of Napoleon’s intentions, the strategical surprise, a concentrated force with one line of communication operating

between two forces with divergent lines, the handling of D'Erlon's force and the attempt to effect a concentration on the battlefield at Ligny, the British and Belgian rearguard action at Quatre Bras and the retreat to Waterloo: Wellington's masterly disposition of troops as contrasted with Blucher's two days earlier; his telling use of advanced posts at La Hougomont and La Haye Sainte; the breaking up of Napoleon's massed attack; the concentration of forces on the field of battle, and the great counterstroke against Napoleon's right and rear and finally the stupendous defeat, the inevitable result of this most difficult manoeuvre when successfully accomplished. They were indeed crowded days of glory."

3. *Causes.*

France was discontented with the Bourbon King Louis XVIII. Napoleon knowing this escaped from Elba and landed in the south of France on March 1st, 1815. He set out on his return to Paris, the army and the people rapidly gathering to his support, and reached there on March 20th. Louis XVIII fled to Ghent. The sovereigns of Europe refused to recognise Napoleon and at once declared war. Each promised 150,000 men for the purpose of finally putting an end to him. Great Britain raised men very slowly but she financed the campaign as she had done in 1814.

4. *The French Army.*

On his return from Elba, Napoleon found scarcely 200,000 men under arms, and of these little more than half were properly equipped. He expanded the old army by adding three extra battalions to each regiment and gave back to units their old numbers (of which Louis XVIII had deprived them). The National Guard was mobilized and old soldiers and the 1815 Class were called to the colours.

With regard to the method of expansion adopted by Napoleon it is interesting to compare his action with our own on the outbreak of war in 1914. Then we did not expand the Territorial Army, but raised new armies. This method, as you know, has since been adversely criticised with the result that, in a future war, the Territorial Army will form the method of expansion of the Regular Army.

By June 1st, 1815, as the result of strenuous exertions extending over a period of $2\frac{1}{2}$ months, and the adoption of many desperate devices, Napoleon's active army, *i.e.*, those whom he had been able fully to equip, arm and munition, consisted of 291,000 men. Behind these,

it is true, there existed a reserve of irregulars, but the yield was uncertain and it is doubtful whether a quarter of the country responded readily to the appeal which was to call up the National Militia. In addition, owing to the necessity under which Napoleon believed himself to be of leaving considerable numbers to watch the frontiers, less than one-half of the 291,000 were available to deliver the decisive blow. Actually the strength of the Army of the North, *i.e.*, the army with which Napoleon proceeded to attack the Allies in the Netherlands, was approximately 124,000 and 344 guns. This army was composed almost entirely of veterans, chiefly prisoners returned to France in 1814. Discipline had, however, deteriorated and the soldiers to a certain extent lacked confidence in their leaders. They were, on the other hand, filled with eagerness to fight and idolatry of the Emperor. Housaye makes the statement that "Napoleon had never before handled an instrument of war which was at once so formidable and so fragile."

This army was organised in 5 Corps, Guard and 4 Corps of Cavalry, namely :—

1st Corps D'Erlon	..	..	20,000	and	46	guns
2nd „ Reille	..	..	24,000	„	46	„
3rd „ Vandamme	..	..	19,000	„	38	„
4th „ Gerard	..	..	16,000	„	38	„
6th „ Lobau	..	..	10,000	„	32	„
Imperial Guard—						
	Mortier	..	..	21,000	„	96 „
Reserve Cavalry—						
	Grouchy	..	..	14,000	„	48 „
Total			..	124,000	and	344 guns

5. The Allies.

The strength of the Allies varies according to different authorities but approximately it can be taken to be as follows :—

Russians	..	Barclay de Tolly	..	..	150,000
Austrians	..	Schwartzenberg	..	..	210,000
In Italy	..	Fremont	..	..	70,000
Anglo-Dutch	..	Wellington	..	..	94,000
Prussians	..	Blucher	..	..	121,000

For the purposes of this lecture it is only necessary to comment on the last two.

(a) *Anglo-Dutch Army*.—The army commanded by Wellington was a very heterogeneous body of troops consisting as

it did of British, Dutch, Belgians, Hanoverians and Nassauers. Six languages were spoken. It had never acted in the field as an army before. The fidelity of many was strongly suspected as they had been raised in countries recently subject to France and their sympathies were consequently supposed to be with Napoleon. It was undoubtedly the worst army Wellington had ever commanded, and to give it confidence in battle he deliberately departed from his Corps organization, and placed his own national troops alternately along the line with the Allied contingents.

The Anglo-Dutch Army was organized as follows:—

Cavalry	..	Lord Uxbridge	..	14,500	44	guns
1st Corps	..	Prince of Orange	..	23,000	48	„
2nd Corps	..	Lord Hill	..	24,000	40	„
Reserve	..		..	32,000	64	„
Total				..	94,000	196 guns

(b) *Prussian Army*.—This was a far more homogeneous force than the Anglo-Dutch Army and contained a good proportion of veteran Prussian regiments. Although its equipment and training were not of a high standard, no hymns of hate were necessary as Prussia had nine years of humiliation to avenge. It was organized as follows:—

1st Corps	..	Zeithen	..	32,500	96	guns
2nd Corps	..	Pirch I	..	32,500	80	„
3rd Corps	..	Thielmann	..	25,000	48	„
4th Corps	..	Bulow	..	31,000	88	„
Total				..	121,000	312 guns

6. *The Supreme Commanders.*

(a) Napoleon has been described by one writer as “the mightiest genius of 2,000 years” and by Napier as “the greatest man of whom history makes mention, the most wonderful commander, the most sagacious politician, the most profound statesman.” He was supreme both in offensive and defensive warfare, and possessed an uncanny insight into the enemy’s brain. In 1815 Napoleon was 46 years of age and not a particularly fit man. He was inclined to underestimate his opponents, forgetting that

during nearly 20 years of war they had learnt war from him. One of the most remarkable facts about Napoleon is the brief period in which he accomplished his great career. If one deducts 17 years for boyhood it leaves less than 30 years for a career embracing achievements that belittle those of a hundred men of ordinary affairs.

- (b) Wellington was a military genius probably second only to Napoleon. In his younger days he built up a high military reputation in India, culminating in his victory at the battle of Assaye. Subsequently as is well-known, he conducted brilliant operations in the Peninsula. Although not very popular with his troops they had implicit confidence in him. At the battle of Waterloo he was also 46 years of age. Later he entered politics and held the office of Premier for two years.
- (c) Blucher was 73 years of age at the battle of Waterloo and had served under Frederick the Great. He was a dashing and impetuous leader although not considered a general of the first order. He was extremely popular with his army and was imbued with a fierce hatred of Napoleon.

7. *The Allied Plan.*

The plan eventually decided upon by the Allies was to march concentrically on Paris starting on July 1st 1815—

British on Peronne.
 Prussians on Laon.
 Russians on Nancy.
 Austrians on Langres.
 Austro-Prussians on Lyons.
 Sardinians on Provence.

Wellington himself was not in agreement with this plan and wished to begin hostilities without waiting for the arrival of the Russians (and even before three armies had completed concentration) and before Napoleon's plans had matured. Blucher sided with Wellington but they were overruled by the other Allied generals who were unwilling to take any risks, and wished to stand on the defensive until all were ready.

8. *Dispositions of Wellington and Blucher.*

(See Sketch Map, "A"). The English and Prussians were disposed on a front of 100 miles from Liege in the east to Tournay in the west. This dispersion of the Allied forces has been made the subject of much unfavourable comment by some historians. It was undoubtedly strategically unsound but it was probably forced on Wellington and Blucher by the length of front they had to watch and by supply difficulties. It must not be forgotten that they drew most of their supplies and all their munitions from their home countries along divergent lines of communication. Wellington was based on Ostend and Blucher on Cologne.

9. *Napoleon's Plans.*

Napoleon was well acquainted with the strength and projects of the enemy. Spies and an incautious foreign press gave him much information. Two plans presented themselves to his mind:—

(i) The massing of the greater part of his army round Paris.

He calculated that the necessity of guarding communications and masking fortresses would reduce the 650,000 Allies entering France to about 420,000 before they reached the Seine. Against this 420,000 he would oppose 200,000 and the entrenched camp of Paris, repeating the 1814 campaign but with more than double the numbers.

(ii) To assemble his army of 124,000 on the Northern Frontie by the 15th June, *i.e.*, before the Austro-Russians could deploy on the theatre, to invade Belgium, beat in turn the English and Prussians and then to fall on the right of the Austro-Russians.

From the military point of view Napoleon would probably have adopted the first plan the success of which appeared certain. But he was not free to act as he had been in 1805 and 1812; it was now very necessary for him to consider public opinion. In addition it was doubtful whether the moral of his army could stand a defensive campaign in France. He finally decided that in order to raise the spirits of all and to retain his own prestige he must win a glorious victory at the outset of the war. He, therefore, adopted the second plan.

To ensure the success of this plan he would have to attack Wellington or Blucher before they could effect a junction of their forces. If he advanced against Wellington's right he would simply drive the

English against the Prussians. Similarly, if he advanced against Blucher's left *via* the valley of the Meuse, in the same way he would hasten the union of the two hostile armies. He, therefore, decided after much consideration to pierce the Allied centre *via* the Charleroi-Brussels road. This road formed the junction point of the Allied armies and their L. of C. ran practically in opposite directions from that road. It was not unreasonable to suppose, therefore, that Wellington and Blucher would each fall back on his own L. of C. to concentrate. Napoleon would thus interpose between the two Allied armies, each numerically inferior to his own and with sufficient room to manœuvre, provided they did retire, to contain one and strike the other.

It is interesting here to note the similarity between Napoleon's plan in 1815 and Ludendorff's attack in March 1918 in France. The combatants were differently grouped it is true but the German attack in 1918 was directed against the junction of the Allied Army, *i.e.*, the British and the French, just as 100 years before Napoleon struck at the junction between Wellington and Blucher. In both cases the British Army was based on northern ports while her ally was based on inland territory. In both cases the Allies were for a time in danger of retiring along divergent lines with the risk of defeat in detail. Numbers were greater in 1918 and weapons very different but the main features of the campaign and the principles on which it was fought out were the same.

10. *Napoleon's Concentration.*

(See Sketch Map "A"). The orders for the concentration of the French army were issued at the beginning of June. Moves commenced on the 5th June and by the 14th June 124,000 Frenchmen, who had been separated by distances varying from 25 to 180 miles, had assembled south of Charleroi. Wellington and Blucher were completely ignorant of this concentration and on the 15th June, when Napoleon had already set foot in Belgian territory, Wellington in a letter to the Czar was calmly explaining his intention of assuming the offensive at the end of the month.

During the concentration Napoleon took elaborate precautions to maintain secrecy and prevent leakage of information. All communications between Belgium and the Rhine provinces were intercepted. In the seaports all vessels were placed under an embargo. Troops were kept ignorant of their destinations, and woods and forests, as in

the Great War, were used to a great extent to conceal them. Wellington remarked "Bonaparte's march on Belgium was one of the finest things in War."

11. *Napoleon's Advance and Crossing of the Sambre.*

The French army commenced its advance from its concentration area at 3 a.m. on the 15th June in three main bodies:—

- Right .. IVth Corps on Chatelet (East of Charleroi Road).
- Centre .. IIIrd, VIth, Guard and Cavalry on Charleroi.
- Left .. Ist and IInd Corps on Marchienne (West of Charleroi Road).

The orders for this advance were issued on the evening of the 14th June. Ropes and Houssaye give them in some detail. The advanced guards of the respective columns were ordered to regulate their march so as always to remain on a line with one another. They were to send out scouts in every direction and question the natives regarding the enemy dispositions. They were to seize all letters in the Post Offices and communicate their information in frequent reports to the Emperor who would be in person at the head of the centre column.

These orders were not, however, faithfully executed. The 1st Corps (D'Erlon) started 1½ hours late and the IIIrd Corps, which should have started at 3 a.m., was still awaiting its orders at 5 a.m. Apparently the officer detailed by Soult (Napoleon's Chief of Staff) to carry the orders to the IIIrd Corps fell from his horse and sustained a broken leg. In addition, on the right, Bourmont the commander of the leading division of the IVth Corps deserted to the enemy carrying valuable information. This desertion tended to confirm in the minds of the troops their fears of treachery and mistrust of their generals.

The crossings of the Sambre were in the hands of the French by the evening of the 15th.

The locations of the four Prussian Corps on the 14th June were as follows:—

- Ist Corps .. Charleroi.
- IInd Corps .. Namur.
- IIIrd Corps .. Ciney.
- IVth Corps .. Liege.

Blucher had long previously decided that resistance to Napoleon, when occasion might arise, should be offered between Sombrefe and Ligny, and the function of the 1st Corps (Zeithen) was to cover the concentration of the Prussian Army in the neighbourhood. It carried

out its task by fighting a rearguard action before Napoleon during the 15th. Foch goes into this rearguard action in great detail in his "Principles of War."

12. *Battle of Ligny 16th June 1815.*

Napoleon had contemplated three possibilities :—

- (a) No serious opposition by Wellington but fighting by Blücher.
- (b) No serious opposition by either.
- (c) Opposition by both.

Early on the morning of the 16th, therefore, when he issued his orders for the continuance of the advance, he divided his troops into a right wing, a left wing and a central reserve ready to throw in where it was required :—

- (a) Right Wing under Grouchy to deal with the Prussians was directed on Sombrefe and consisted of the IIIrd, IVth and VIth Corps and 13,000 Cavalry.
- (b) Left Wing under Ney (who had arrived and thrown in his lot with Napoleon) was directed on Quatre Bras and consisted of Ist and IIInd Corps and Kellerman's Cavalry Corps.
- (c) Central Reserve under himself consisting chiefly of Imperial Guard.

It is obvious from these orders that Napoleon was under the impression that the Prussians had been completely surprised on the 15th, that the opposition which Grouchy would be called upon to face on the 16th would consist of the Prussian Ist Corps only, and that the remaining three Prussian Corps would not receive warning in time to concentrate against him. His impression was, of course, faulty. At the first alarm from his outposts on the 14th Blücher left Namur and ordered the immediate concentration of his whole army on the position he had previously chosen. By noon on the 16th his Ist, IIInd and IIIrd Corps were drawn up between Sombrefe and Ligny and actually were superior in numbers to the French opposed to them by 83,000 to 72,000.

Wellington, who had arrived in Quatre Bras on the morning of the 16th, rode over to see Blücher and promised to effect a junction with the Prussians in the course of the afternoon, if he were not himself seriously attacked. He at the same time commented adversely on the exposed nature of the Prussian dispositions.

During the morning of the 16th Napoleon carried out a detailed personal reconnaissance of the Prussian dispositions. He had originally intended to attack at 12 noon but owing to various delays the attack was not launched till 2-30 p.m. thus leaving him less than 7 hours of daylight in which to defeat Blücher.

The Prussian resistance was obstinate and the Emperor, confident that Ney would have little difficulty at Quatre Bras, called upon him to fall on the Prussian rear. This order was carried to D'Erlon (Commander of the 1st Corps) and afterwards to Ney. The former, whose corps was in rear, proceeded to obey and abandoned the road to Quatre Bras. He was, however, recalled by Ney who misconstrued the Imperial instructions and who was in the heat of a desperate struggle at Quatre Bras against the Anglo-Dutch forces. D'Erlon's Corps, therefore, spent the day wandering between Quatre Bras and Ligny taking part in neither battle.

The Prussian Army was defeated at Ligny but not annihilated. Its losses had been heavy: it had been compelled to retreat, but it was still an organized body of troops free to choose the direction of its retreat.

13. *Battle of Quatre Bras 16th June 1815.*

At 5 p.m., 15th June, Wellington issued orders for the concentration of his army within Divisional areas. Later, having received news from Blücher that the French were advancing and that Charleroi had been taken he ordered a concentration on Nivelles (6 miles west of Quatre Bras), the Dutch Belgians to evacuate Quatre Bras. Fortunately the Chief of the Prince of Orange's Staff modified this order on his own initiative with the result that the Dutch Belgians remained at Quatre Bras.

Ney on taking over command of the Left Wing of the French Army on the evening of the 15th found his troops very exhausted. He, therefore, bivouacked some 5 miles south of Quatre Bras merely sending the Garde Cavalry to Quatre Bras itself. This cavalry at 6 p.m. attempted to drive back the Dutch-Belgians in the neighbourhood but failed.

Ney did nothing further on the morning of the 16th, but awaited definite orders from the Emperor. These arrived at 11 a.m.

Wellington himself arrived at Quatre Bras at 11 a.m. having been at the Duchess of Richmond's Ball in Brussels the night before. He

was confident he could defeat the French at Quatre Bras and could then go to the aid of Blücher at Ligny. Unfortunately his confidence was based on incorrect march calculations of his staff who made various units on paper arrive at Quatre Bras long before they could in practice. Wellington, however, visited Blücher as previously mentioned and in good faith passed on this erroneous information.

The battle of Quatre Bras swayed to and fro during the 16th, reinforcements arriving on both sides.

At 2 p.m. Napoleon, who was ignorant of the desperate nature of the engagement at Quatre Bras, ordered Ney to fall on the Prussian rear at Ligny. The order was received by Ney at 4 p.m., and he was, of course, unable to comply with it. D'Erlon, with the 1st Corps had, as already mentioned, attempted to do so, was recalled by Ney, but arrived too late to take part in the engagement at Quatre Bras.

The action of Quatre Bras ceased when darkness fell at 9 p.m., both armies having retaken practically the same positions they had held in the morning. It is a typical example of an encounter battle even though the Dutch-Belgians were in position the evening before.

The failure of Ney at Quatre Bras can be put down to two main causes :—

- (a) His inaction and lack of enterprise on the morning of the 16th when he did nothing until he received Napoleon's further orders at 11 a.m.
- (b) The failure of D'Erlon's Corps to take part in the battle.

14. *Comments on the 16th June.*

It is fairly safe to say that the issue of Waterloo itself turned upon the disastrous counter-marching of D'Erlon's Corps between Quatre and Ligny. Had this Corps been with Ney it is practically certain that Wellington would have suffered a disaster. Had it been with Napoleon the Prussians at Ligny would have been destroyed. As it was it managed to take part in neither battle. Wellington held his own at Quatre Bras and the Prussians at Ligny escaped to fight two days later at Waterloo.

15. *Events of the 17th June.*

On the evening of Ligny the Emperor had not thought it possible to carry out a sustained pursuit of the Prussians. His troops had to be reorganized and fed. He had had no news from Ney and there

was still the possibility of the intervention of the 4th Prussian Corps which had not arrived in time to take part in the battle.

The Prussians retired in fairly good order. Napoleon assumed, not unnaturally, that they were retreating to the east on Liege, *i.e.*, along their own L. of C. It was not, however, until nearly noon on the 17th that he despatched Grouchy in pursuit with 33,000 men. It is true that previously Napoleon had ordered certain reconnaissances, but even then his delay in carrying out an organized pursuit of a defeated enemy is difficult to understand. There is no doubt that he was obsessed by a pre-conceived idea that the Prussians would retire along their original L. of C.

The Allies on the morning of the 17th showed more energy. Blucher's forces shook themselves together at dawn and retired in a northerly direction on Wavre and not in an easterly direction on Liege as Napoleon surmised. (See Sketch Map "B"). The responsibility for making this decision rested with Gneisenau, the Prussian Chief of Staff. Blucher was temporarily sick having badly fallen from his horse at Ligny. Wellington referred to Gneisenau's decision in a letter to the King of the Netherlands as "the decisive moment of the century." It is very doubtful, however, whether Gneisenau when making this decision foresaw the tremendous consequences it would bring about. He deliberately abandoned his original L. of C. it is true, but with the knowledge that he could open an alternative one *via* Louvain and Tirlemont. He did not retreat on Wavre definitely with the object of joining Wellington in covering Brussels because at that time he was unaware of the direction of Wellington's retreat. Gneisenau had, it seems, chosen Wavre more as a position of waiting; the defence of which was rendered easy by the River Dyle.

By nightfall of the 17th the mass of the Prussian Army were safe in the neighbourhood of Wavre. Grouchy in pursuit had failed lamentably. His whole conduct was characterised by want of resolution. He had 5,000 cavalry but these moved little faster than his infantry. It was not until about 10 p.m. on the 17th that Grouchy began to realize that the whole of the Prussian Army had retired on Wavre. At that time he was about 12 miles south of Wavre.

At Quatre Bras the French and the English remained in their respective positions during the early morning of the 17th.

Wellington heard details of the Battle of Ligny at about 8 a.m. and realizing that his left flank had now become exposed by the Prussian

retirement, he decided to retreat on Waterloo. This retreat commenced at 10 a.m.

It was not until 9 a.m. that Ney learnt the result of the Battle of Ligny. He, however, committed his troops to no further action. Napoleon having, as he thought, disposed of the Prussians and arranged for their pursuit, himself arrived in the neighbourhood of Quatre Bras with the remainder of the French troops at 2 p.m. He commenced his advance immediately and for a time Wellington's rearguard was very hard pressed. A storm intervened, however, and Napoleon's pursuit slackened off during the late afternoon, and by evening it had ceased altogether.

Wellington's decision to stand at Waterloo has frequently been the subject of much criticism. There is no doubt that had Blucher retired along his original L. of C., Wellington would have been exposing himself to the risk of defeat by taking such a course. It is safe to say, therefore, that his decision was based on the confident belief that the Prussians would arrive in time to take part in the subsequent battle. This is definitely confirmed by the communications which passed between Wellington and Blucher on the 17th and early morning of the 18th. At 9 a.m. on the 17th a Prussian officer arrived with the information that the Prussians were concentrating at Wavre (about 8 miles east of Waterloo) and asked what Wellington intended to do. Wellington replied that he intended offering battle on the Mont St. Jean position if he could be supported by at least one of Blucher's Army Corps. If not he would be compelled to continue his retirement and abandon Brussels. At 2 a.m. on the 18th Wellington received another message from Blucher to the effect that the Prussian IInd and IVth Corps would march in the direction of Waterloo at daybreak, and that the Ist and IIIrd Corps would also hold themselves in readiness.

Wellington's decision to stand at Waterloo was, therefore, based on a definite assurance of help from Blucher, and by doing so he took no more than the inevitable risk which all combined operations of this nature involve.

16. *Night, June 17/18th.*

In the late evening of the 17th Napoleon had carried out a reconnaissance and discovered that the whole of the Anglo-Dutch forces were occupying the Mont St. Jean (Waterloo) position. He was, however, anxious during the night lest Wellington should continue his

retirement and he, in consequence, personally visited his own outposts. There is no doubt that Napoleon attached tremendous importance to personal reconnaissance.

17. *June 18th (Battle of Waterloo).*

It is interesting to note the difference in the dispositions of Wellington and Napoleon on the morning of the 18th. The former leaving nothing to chance and still sensitive about his right flank placed 17,000 men at Hal to protect it. The latter left his right flank practically unguarded and concentrated every available man for the battle.

Wellington's position on the Mont t. Jean Plateau (see Sketch Map "C") lay to the north, *i.e.*, behind the road from Ohain to Braine L'Alleud. This road was lined with a hedge on either side and embanked. It consequently formed a natural ditch or fortification in front of the position, the approaches to which were strengthened by the advanced posts of La Hougomont (held by 1,200) and La Haye Sainte (held by 400). There was a gentle slope in front of the position which gave a good field of view, and a gentle slope in rear which served to conceal Wellington's supports and reserves.

The total number of Wellington's troops present at the battle was approximately 68,000 (including 12,000 cavalry and 186 guns). Of these 31,000 held the main position. The greater part of the remainder were in reserve and concealed from view on the reverse slopes of Mont St. Jean.

It is interesting to compare Wellington's dispositions with those of the Prussians at Ligny whose reserves were fully exposed to view and suffered considerable losses from artillery fire before they came into action.

Napoleon had concentrated on the field of battle 74,000 (including 15,000 cavalry) and 246 guns.

Napoleon had intended to attack at 9 a.m. The attack was delayed, however, until 11-30 a.m. in the hope that the ground, which the storm on the previous day had made very soft, would harden and facilitate the movement of artillery. Immediately the attack commenced a message was despatched by Wellington to Blucher asking for help as previously arranged.

The first attack was directed against the advanced post of La Hougomont the capture of which would enable the French to enfilade

an attack on the English centre. This attack was unsuccessful. At 1-30 p.m., while Napoleon was preparing to attack the left centre of the English position, he became aware of the approach of the Prussians. Bulow's IVth Corps had reached the Woods of Chapelle St. Lambert a few miles to Napoleon's right flank. Lobau's Corps and some light cavalry altogether 10,000 men, were detached to watch the Prussian advance. Napoleon apparently had no thought of retreat although he must have realized his great danger, and the fact that the force he had gathered together to overwhelm Wellington had now been reduced by 10,000 men. He was undoubtedly under the impression that Grouchy was maintaining the main body of the Prussian Army still a long way off.

Napoleon renewed his attacks with great vigour but the advanced posts of La Hougomont and La Haye Sainte continued to hold out. The latter fell between 5 and 6 p.m.

At 4-30 p.m. the main body of Bulow's Corps had reached the Bois De Paris, some 3,500 yards to the right of the French position. Wellington who had been withstanding the French onslaughts with great difficulty continually sent messages to the Prussians for help. Lobau's Corps which had been sent to stem the advance of the Prussians was now gradually being pressed back before superior numbers, the French line of retreat consequently being threatened.

At 7 p.m. the Prussian 1st Corps (Zeithen) began to arrive along the Ohain Road. Napoleon then made his final effort with the Imperial Guard against the English position. It failed. The Imperial Guard broke and at 8 p.m. Wellington gave the order to advance. The Prussian 1st Corps advanced at the same moment and the French gave way on their right flank before the Prussian IVth Corps. In a moment the whole of the French Army was transformed into a panic-stricken mob and fled from the battlefield.

A relentless pursuit was carried out by the Prussians who are said to have hunted the remains of the French Army out of seven successive bivouacs and finally drove them over the Sambre, a helpless horde of fugitives. Thus ended the battle of Waterloo.

Meanwhile Grouchy, instead of containing the Prussian Army was himself contained by the Prussian IIIrd Corps at Wavre. He heard of the disaster on the morning of the 19th and carried out a successful

retreat, escaping into France along the Meuse Valley with his 33,000 men intact.

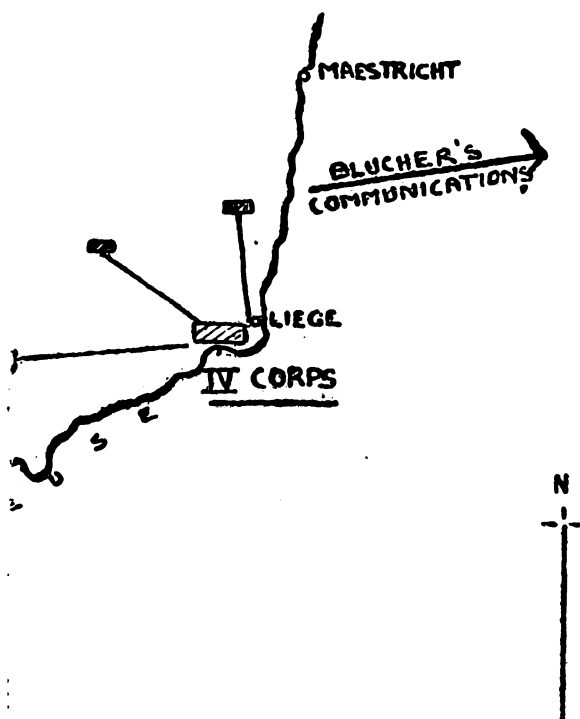
18. *Lessons.*

I now propose to enumerate very briefly a few of the chief lessons of the Waterloo Campaign—

- (a) *Offensive Action.*—F. S. R. II states that victory can only be won as the result of offensive action. It is interesting to note that Napoleon, Wellington and Blucher all desired to assume the offensive. The two latter were overruled by their Allies.
- (b) *Surprise.*—F. S. R. II states that surprise is the most effective and powerful weapon in war. Consider the rapidity and secrecy of Napoleon's concentration on the Belgian frontier. Unknown to both Wellington and Blucher 124,000 Frenchmen, who had previously been separated by distances varying from 25 to 180 miles, were concentrated on the frontier in 10 days.
- (c) *Concentration.*—F. S. R. II states that concentration of superior force at the decisive time and place are essential for the achievement of success. Napoleon, after Ligny, detailed a minimum force to contain Blucher and concentrated every available man on the field of Waterloo. Wellington, on the other hand, retained 17,000 men at Hal who did not take part in the battle.
- (d) *Pursuit.*—F. S. R. II lays down that pursuit should be taken up at the earliest possible moment, and it should be continued day and night without regard to the exhaustion of men and horses so long as the enemy's troops remain in the field. Consider the difference between Napoleon's arrangements for the pursuit of the Prussians after Ligny, when he delayed despatching Grouchy till noon of the next day, and the relentless pursuit carried out by the Prussians immediately after Waterloo.

19. *Conclusion.*

We frequently hear that Blucher saved the British at Waterloo. Most will admit that Wellington would have stood little chance alone against the troops which Napoleon had massed against him, but on the other hand, there is no doubt that Wellington saved Blucher just



SKETCH MAP 'A'

SHOWING APPROXIMATE LOCATION OF
THE OPPOSING FORCES ON 14TH JUNE.

APPROXIMATE SCALE

10 MILES — 1 INCH



ANGLO-DUTCH



PRUSSIANS

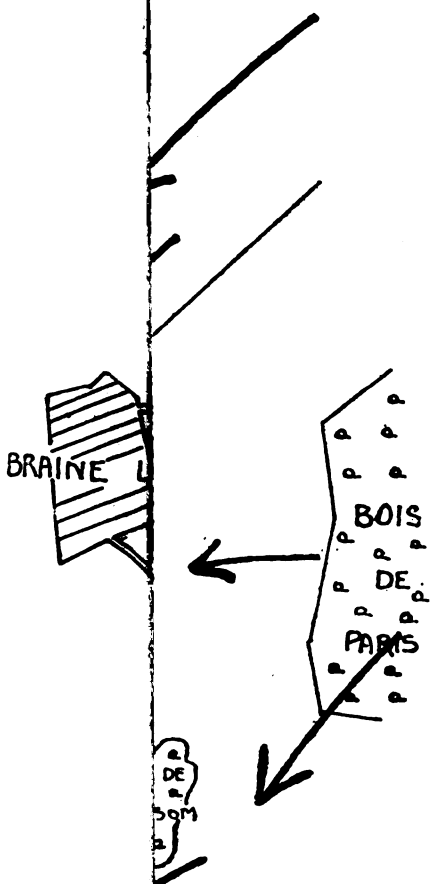


FRENCH

BRUSSELS

WATER LOG

QUATRE
BR
NEY {



GRAPHIC SCALE

500

1000 yds

FRENCH

ANGLO-DUTCH

DIRECTION OF PRUSSIAN ADVANCE

as much as Blucher saved Wellington. Each was absolutely necessary to the other. Two things, however, do seem to stand out above all others in the campaign and they are these—

- (a) The decision of Gneisenau, Blucher's Chief of Staff who, after Ligny first directed the Prussians on Wavre and thus rendered possible their intervention at Waterloo.
- (b) The loyalty of Blucher and his eagerness in marching to Wellington's aid at Waterloo.

With regard to Napoleon there is no doubt that he had deteriorated. He had lost confidence in himself and to quote from Houssaye "he waited for the lucky moment, let it pass, and did not dare in time to risk all in order to save all."

DISTRIBUTION IN DEPTH.

By

COLONEL H. ROWAN-ROBINSON, C.M.G., D.S.O., R. A.

The British army may for many years to come have to fight in Eastern and Middle-Eastern countries where armed mechanical vehicles are few, where there is no great weight of artillery and where infantry may still remain the queen of battles. Fighting in such country is indeed more probable in the existing world-situation than on the Continent of Europe, and this article is written to direct attention to the defensive phases of the warfare likely to be encountered there.

The subject is no new one. Distribution in depth, both in attack and defence, was much affected by the ancients and has been handed down by them to this day. There has never been any question as to whether troops should or should not be disposed in depth but only as to the amount and method of such disposition. The matter has always been one of degree, and the determination of the correct grade has had to be evolved from a study of the prevailing conditions, principal stress being laid on those of the morale of the troops and on armament. Where leaders failed to diagnose conditions correctly, their battle formations were unsound, and they suffered accordingly. The problem has to be solved, not only in general terms for the period, but also in particular terms for each battle. Hannibal was beaten at Zama chiefly because the depth of his array, normally so correctly balanced, was, in that battle, excessive. Napoleon for various reasons formed his troops into deep columns and was almost uniformly successful till he met the English line. Like the problem of armour and projectiles, the problem of 'Distribution in depth' has persisted through the ages. Great leaders were those who knew best how to solve it, though the expression itself was outside their knowledge.

The writer discussed the question in an article published in a military journal some 5 years ago. He pointed out that, just as our defeat at the second battle of Cambrai was due to an over-extension of front, so was the disaster to the Fifth Army largely caused by a rush to the other extreme. In March 1918 'Distribution in depth' was on every tongue. It was a new and wonderful panacea culled from our adversity at Cambrai and certain enemy successes in the salient; and an idea seemed to prevail that, provided the magic words could be

uttered and to some degree made effective, the successful defence of any position was assured. In that battle, however, extreme depth dangerously masked fire-power—the main weapon of the defence—and reduced fire-effect. The thin forward position was overwhelmed as by a tidal wave. A succession of lines built one behind the other offered no obstacle to the enemy once the main battle zone had been penetrated on a broad front, though they absorbed a large number of men in digging and garrisoning them. The result was the greatest disaster ever experienced by the British Army. The lesson, however, was not learnt, for we preferred to ascribe our defeat to the mist and to the overwhelming strength of the enemy rather than to faulty dispositions.

The story of the St. Quentin battle having been misread, the phrase, used in an extremist sense, has remained current coin to this day. It is for us, now, neither to rush to one extreme or the other nor even to seek a *via media*, but rather to study the history of the subject and the existing conditions in our own army and in those of our possible opponents, thence to deduce the degree of depth advisable, modifying it where necessary, to meet the conditions special to the place and day of battle.

This paper, as already stated, only deals with defence in mobile warfare in the absence of tanks. It may be well to compare the conditions under these premises with those which obtained in 1918.

In both cases, as regards defensive dispositions, tanks may be discounted, for the German never took seriously to them. The principal factor that brought about great disposition in depth in the late war on both sides was the mass of artillery employed. It was possible for the forward zone to be blotted out by gun fire and, therefore, apart from reserves, it was essential to have a number of lines in rear, if the position was to be held. In mobile warfare to-day this mass of artillery will be conspicuously absent. To take it into the field would immobilise any army. If, and when, warfare stabilizes, it will appear again ; but the constant hope in all armies is to gain victory by mobile power and to avoid the stagnation of trenches.

In manœuvres and other exercises it is generally found that the attacking commander clearly appreciates the altered conditions when asked to carry an extended position with the support of an exiguous number of guns. He realizes that the most he can hope to achieve

is to crush with fire, and then attack, important portions of the position successively. When taking part in similar exercises, however, the defending commander in disposing his troops fails to realize the effect of a weak opposing artillery and seems still to be bound by tentacles of trench warfare.

His excuse is perhaps to be found in the training manuals. The latter are very clear in principle on the relation of the weight of attacking artillery fire to depth in a position and on the importance of forward fire power, but they do not carry their teachings to a logical conclusion.

I. T. Vol. II says on p. 101 "the greater the weight of the artillery fire which may be brought to bear by the attack, the greater must be the depth of the position," and, conversely, though the statement is less decided "*against an enemy.....weak in artillery..... some depth may be sacrificed,** if this is considered advisable, with a view to giving the weapons of the defence full play."

And in I. T. II Sec. 20 (ii) "The first consideration will be to determine what ground is vital to the conduct of the battle. This decision having been made, the defensive position will be selected. There must be a clear conception in the minds of all commanders as to the foremost line of defended localities in front of which the attack is to be stopped, and *arrangements will be made to develop sufficient fire power for the purpose. Reserves should be immediately available to drive the enemy out* should he, nevertheless, succeed in gaining a temporary footing in the position.

Resources will seldom permit of a position in mobile warfare being held strongly throughout its whole length *nor will it usually be possible to organize more than one zone of fire defences.*"*

And on p. 106 (p. 108 in Indian Edition) "In advance of the position outposts will be placed to guard against surprise *while the position is being prepared,*"* i.e., the outpost line is a temporary one only.

Unfortunately, however, there are other sentences which appear to proclaim a different policy.

F. S. R., Vol. II, p. 161 says :—"As a general guide it may be taken that a battalion at war establishment, suitably organized in depth and finding its own local reserves can be distributed over an

* The italics are the writers.

area of about 1,000 yards square." It is suggested that, against the weak artillery available in mobile warfare, such depth would but seldom be necessary and would nearly always lead to a loss both of fire effect and hitting power.

I. T. Vol. II, p. 105 (p. 107, Indian Edition) states : " Behind the defended localities *reserves should be distributed to give depth to the defence,** to ensure protection of the flanks of the forward localities and to counterattack should the opportunity occur."

It is interesting to compare this with the corresponding statement in F. S. R., Vol. II—2 years earlier in date.

" Behind these localities, *reserves will be distributed in depth for the purposes of local or general counterattack.** In the distribution of these reserves, special attention must be paid to the security of the flanks." The difference is most marked. In F. S. R. the reserves are given one definite task that of counterattack ; but in the more recent publication reserves are primarily allocated to give depth to the position (*i.e.*, to be placed in defensive positions in second line), and the instruction to counterattack is made conditional. The wording in I. T. suggests that a retrograde movement towards trench warfare methods has been initiated. To effect the delivery of a successful counterattack much time must be spent in reconnaissance of ground over which it is intended to operate, in liaison and in making arrangements for mutual support and covering fire. For the task of giving depth to a position on the other hand the preparations necessary are equally lengthy but are of a wholly different nature. Reserves given two such tasks simultaneously may well fail in both.

I. T. appears to recognize that in mobile warfare the absence of weight in the attacking artillery will, as regards that factor,—incidentally the determining factor—obviate the need for great depth in the defender's dispositions. Nevertheless, in view presumably of some other factors which are not mentioned, an enhanced, rather than a reduced, importance is given to distribution in depth.

That, anyhow, is how the army reads it. In promotion examinations candidates always distribute their commands up to or beyond the official limits of depth. At recent manœuvres a Brigade with attached troops took up a position in difficult country 2,000 yards in depth. The Brigadier posted two battalions in front line and two in second

*The italics are the writer's.

line, the latter with the tasks of giving depth to the position ; securing the flanks ; and of delivering a counterattack. This was almost exactly according to the book, though the depth limit there for a brigade is put at 1,500. The position was weak everywhere : the forward zone had no real strength because the rear zone was too far back to give it any practical support ; the reserves were too distant to have any chance of restoring the situation in the front line, or of attacking beyond that line, and, having two other tasks besides that of counterattack, were too weak to exercise a serious influence on the battle. The result was that both lines were easily forced.

In order to arrive at a correct distribution in depth one must first examine the elementary requirements of defensive action.

The first is the retention of some power of manœuvre, without which the defender may not be able either to force his opponent to attack, to draw profit from a successful action or to extricate himself if defeated. The best way of retaining the power of manœuvre is to commit the smallest possible portion of the force to the defence of the position and to hold the remainder as a mobile reserve.

The second requirement is Stopping Power. Here the best weapon is the machine-gun, which is so effective that, if well emplaced, with a good field of fire and carefully camouflaged, it is, in the absence of tanks, almost invincible. Machine-guns are indeed the dominating factor in resistance, and the other arms have to act as their servants : the sapper to help with the emplacement in building and camouflage ; the gunner to fill ground dead to their fire with shell and to neutralize the hostile artillery whose chief targets they are ; the infantry to replace their casualties.

Thirdly, there is Surprise. If the enemy can be surprised by the defence ; if he can be persuaded to attack in a false direction ; if he can be caught in close order under heavy fire ; if he can be suddenly countered in flank, then may be achieved that rarity—a defender's victory.

Fourthly, there is Information, which is often on the side of the defender, for the attacker must move and disclose his dispositions whereas the defender need not.

Lastly, comes Ground, the proper use of which facilitates manœuvre, fire effect, camouflage and surprise.

Linking up all these elementary requirements it appears that a well informed defender may be able to manœuvre the main body of his force, covered by a comparatively thin line of well sited and well hidden machine-guns, in such fashion as either to effect a surprise attack, or to extend a line, or to deepen it, or to do anything else the situation may demand. The comparatively immobile machine-guns furnish the pivot, the mobile rifle men the striking force.

In the case of artillery, distribution in considerable depth is required, the forward guns to force the enemy to an early deployment, the remainder to enable a retirement, should it be necessary, to be carried out by bounds. Such a disposition enables full value of fire power to be obtained (for gun fire unlike rifle and M. G. fire is not liable to be masked) and at the same time if rear batteries have their teams at hand provides a mobile force of artillery for the counterattack.

In this survey of present requirements no great depth appears to be normally essential, though special conditions such as an unusually powerful attacking artillery or great difficulty in camouflage may demand it.

**SOME NOTES ON THE OPERATIONS LEADING UP TO THE
BATTLE OF TUZ KUMATLI IN MESOPOTAMIA IN
APRIL 1918.**

By

**BREVET LIEUT.-COLONEL H. E. CROCKER, C.M.G., D.S.O., 2ND
ESSEX REGIMENT.**

Early in 1918 the Turkish forces to the north of Baghdad were disposed as follows:—

Mosul	..16th and 22nd Regts.	..2,400 rifles, 24 M. Gs., 4 mountain guns.
Erbil	..Hd. Qrs. VI Division Div. Squadron One Battery, 4th R. A. Regt. Assault Coy. Engineers.	..50 sabres, 400 rifles. ..8 guns.
Alton Keupri	..1/1st Regt. Hd.-Qrs. XIII A. Corps.	..350 rifles, 3 M. Gs.
Kirkuk	..Engineer Bn. Depot Battalion One 10·5 cm. Battery. 2/4th Artillery Regt. 33rd Squadron.	..120 sabres, 610 rifles. .. 12 guns, 5 M. Gs.
Chemchal	..1/18 Regt. 2 Mountain Batteries	..400 rifles, 2 M. Gs. ..2 mountain guns.
Tauk	..2/1st Regt.	..350 rifles, 3 M. Gs.
Tuz Kumatli	..Hd.-Qrs. II Div. 1/6 Regt. 3/6 Regt., 2nd Div. Artillery.	..700 rifles, 8 guns. ..6 M. Gs., 2 mountain guns.
Kifri	..3/1st Regt. 2nd Div. Squadron. Assault Coy.	..38 sabres, 550 rifles. ..1 M. G.
Qarar Balaq	..1 Squadron 1 Coy. 3/1st Regt.	..50 sabres, 100 rifles. 2 M. Gs.
Abu Gharaib	..2/6th Regt.	..12 sabres, 350 rifles, 2 guns, 8 M. Gs.
Qarah Tappah	..5th Regt. 1 Coy. Engineers 2nd Div. Artillery.	..1,160 rifles, 6 guns. ..14 M. Gs., 3 mountain guns.

Bane	..Frontier Coy.	..100 rifles.
Sulamanieh	..3/18th Regt.	..800 rifles, 8 M. Gs.
	Depot Bn.	..2 mountain guns.
	Tota	
	Sabres	..270
	Rifles	..8,280
	Guns	..28
	Machine guns	..46
	Mountain guns	..19

These forces were to be attacked before the hot weather set in, *i.e.*, before the end of April. Orders were issued accordingly for columns, composed of cavalry and portions of the XIII and XIV Divisions, to move in towards a common centre from various points with the object of crushing the Turkish detachments in detail before they could have time to concentrate.

These columns were composed as under.—(See Sketch “A”).

“A ” Column. Composed entirely of cavalry.

Objective—to move up west of the Jebel Hamrin and get behind Tuz Kumatli and thus cut off the retreat of the Turks.

“B ” Column, consisting of the XIII Division, less 39th Bde. was divided as follows :—

“B1 ” Column. 38th Infantry Brigade.

Objective—to march *via* Ain Laila and Umr Maidan and attack the Turks at Abu Gharaib.

“B2 ” Column. XIII Div. Hd.-Qrs. and the 40th Inf. Bde.

Objective—to march, east of the Jebel Hamrin to Umr Maidan. The 40th Inf. Bde. was to be kept in hand as general reserve.

“C’s ” Column. 8th Cheshire Regt. (40th Inf. Bde). One section mountain battery, one squadron cavalry.

Objective—to march with “B1” Column as far as Umr Maidan and then move up into the Jebel Gilabat with the object of cutting off the retreat of a Turkish battalion at Ain Faris.

“C ” Column, taken from the XIV Division.

Objective—to march westwards from Qizil Robat on Qarah Tappah and Kifri.

"D" Column. Cavalry.

Objective—to move up the Adhaim River from the west and threaten Abu Gharaib, thus distracting the attention of the Turks, while "B1" Column attacked them from the east.

Such were the broad outlines of the plan, and, needless to say, the success or failure depended largely upon secrecy. Should the Turks get wind of the proposed offensive, they would probably follow their usual plan of withdrawing far to the rear before our columns could concentrate, and thus slip out of the net which was being spread with so much care for their discomforture.

In spite of strict orders, it was, as a rule, found to be impossible to prevent the leakage of information. The following incidents afford a good example as to how information was spread abroad.

Our battalion, the 8th Cheshires, before the concentration; was at work on a road between Deli Abbas and Ain Laila. The first intimation that we received that any move or operations were contemplated was brought in by our Quartermaster from the Supply Dump, where full details of a large advance in the near future were freely discussed. The same day a neighbouring Arab Sheikh came to wish us "Godspeed" on our approaching expedition against Kifri.

In the course of a day or so we moved off as foretold and joined "B1" Column. We were to form the nucleus of "C's" Column, and our cavalry and guns were to join us at Umr Maidan. We marched on the 25th April 1918 with a strength of 26 Officers and 926 other ranks, having lately been made up to strength by the opportune arrival of drafts. For months we had trained the men to march and work with their packs, and this training was now to stand us in good stead.

The next morning we marched at 4.50 a. m. to Umr Maidan on the Lesser Naft River, and bivouacked near the village. Shortly after our arrival our cavalry and mountain guns joined us, and our column was complete. No machine guns, from the Brigade Machine Gun Co. could be spared.

"A" Company was at once sent across the river to occupy a hill on the far side, where they could command roads and tracks leading to Kifri and other passes in the Jebel Gilabat. (See Sketch "B").

We soon received our orders, which were, briefly, to find our way during the night to a pass in the Jebel Gilabat where the trade route

led through the hills towards Kifri, and to cut off the retreat of a Turkish battalion at Ain Faris. We were to be there at 5 a.m. Nothing fresh was known of the enemy's movements.

The writer accompanied a cavalry patrol which was sent out to reconnoitre and to find the way through the hills. Crossing the river by a ford close to our bivouac, we rode past the hill held by "A" company, through a deep nullah, and then right-handed towards the hills. We followed a rough track for some distance, past the village of Abu Alaik, and, crossing an open space in front of the village, we hit off the track on the far side. Luckily, as it turned out, we took compass bearings which were to prove of great use at night. In spite of an inaccurate map, we eventually found ourselves on the right track, and had no difficulty in following it as it wound upwards among the low mud hills, intersected in all directions by nullahs. We soon had practical proof of the existence of the enemy, when a heavy and fairly accurate fire was suddenly opened on us and we had to gallop for cover.

Leaving the bulk of the squadron with the Hotchkiss gun to cover our advance, we took a few men, and, protected with a small advanced guard and flankers, we rode along the track until we reached the pass, which was to be our objective to-night.

While trying to fix our position on our faulty map, our right flanker rode in with the news that a large party of Turks were creeping down the hill with the evident intention of cutting us off. We made off at once, and scrambling through the nullahs, we reached the remainder of the squadron, and returned to our bivouac.

Our plans for the nights operations were as follows:—

Leaving the cavalry behind to join us as soon as it got light, the remainder of the column was to march at midnight. We judged the distance to be 5 miles, and our pace along the track to be a little over one mile an hour. This would allow a margin for error. All carts and animals were to be parked at Abu Alaik. The cable wagon, which had joined us from the Divisional Signal Coy., was also to be left at the village, and the cable continued by hand. Visual signal communication was also arranged.

The column started at midnight, and thanks to the compass bearings taken that afternoon, no difficulty was experienced in picking up the track on the far side of the village. It was not an easy task

to follow the rough ill-defined track, but there happened to be a full moon, which helped us considerably. Just as it was becoming light we approached the pass, and took due precautions in case of surprise. The advanced guard picketed hills on either side of the track. Nothing happened, however, and we finally reached the pass a few minutes ahead of time. Outposts were at once pushed out to right and left, and an officer's patrol was sent out towards Ain Faris for news of the Turkish battalion. Our cavalry arrived shortly afterwards, and were sent out to reconnoitre the open plain towards Kifri, which we could distinguish in the distance. We had, in the meantime, reported our arrival to the division.

After some time the officer's patrol returned and reported no signs of the Turks, and the cavalry also signalled back a message to the same effect. By now we could see the advanced guard, and presently the main body of the Qizil Robot Column winding across the open towards Kifri.

The Survey Section now came up and fixed our position, and solved the mystery of our map—it was 5 miles out.

That afternoon we received orders to rejoin our Brigade in the Divisional Column, which was about to advance on Tuz Kumatli.

Information about the enemy was uncertain. It appeared that all their detached forces had fallen back in the direction of Tuz Kumatli where they were reported to be concentrating. If this was the case—as it proved to be—the Turkish Commander was playing into our hands. Operating, as he was on interior lines, it is not clear, at first sight, why he did not concentrate his detachments, and attack our small columns in detail as they struggled through the trackless hills. There were persistent rumours of the approach of strong reinforcements from Mosul but of these nothing definite was known. It was quite possible that the Turks, acting on the strength of this rumour, would make a stand at Tuz Kumatli. Should they, however, fall back on Mosul the lateness of the season and the increasing length of our line of communication, would forbid a further pursuit, for the time being, at any rate.

The situation with regard to our own columns was as follows :—

“ C ” Column had occupied Qarah Tappah and Kifri.

“ A ” Column was working up north of Tuz Kumatli.

“ D ” Column was moving on Tuz Kumatli from the south.

“B1” Column had turned northwards towards Tuz Kumatli, thus conforming with the general direction of the columns.

“B2” Column, with the XIII Divisional Headquarters was at Umr Maidan, just about to advance towards Tuz Kumatli from the south-east.

“C’s” Column had rejoined the 40th Infantry Brigade and had thus ceased to exist.

A general advance was ordered towards Tuz Kumatli. Our brigade, the 40th, trekked all night to avoid the heat, which was now making itself felt, and bivouacked at Kulu Wand, where the cavalry had attacked some Turks strongly entrenched across the road.

Kulu Wand was within a day’s march of Tuz Kumatli, and we now received our orders for the fight on the morrow. The Turks were reported to be holding a position with their 2nd Division as shown in Sketch “C.” Our cavalry were behind the Turks, B1 Column was advancing up the right bank of the Aq Su (White River) and we were advancing towards the left bank from the south-east.

The orders for the 40th Infantry Brigade were as follows :—

The Welch Fusiliers with a mountain battery were to act as advanced guard and start at 0300 hours along the Kifri—Tuz Kumatli road. If the enemy should be met with, he was to be attacked at once, the hill parallel to the road occupied, and the way prepared for the attack of the main body, which was to start at 03 20 hours.

This was our second encounter with the Turks’ 2nd Division, who had driven us back in a counter attack at the Battle of the Boot on the Adhaim River just a year ago.

The brigade moved off along the Tuz Kumatli Road in the following order :—5th Wiltshires, 4th South Wales Borderers, 8th Cheshires (less one Company). Just as it was getting light, we heard heavy firing in front, and news soon came back that the advanced guard was held up by a strong force of Turks entrenched across the road and in the hills to the right of it. The Welch had drawn off the road to the left, where the mountain guns were in action. The Wiltshires were at once ordered to attack the hills, covered by the fire of the artillery, which included one section of 6 inch howitzers. The enemy’s fire from rifles, machine and mountain guns was so heavy and so well directed, that it was not until the South Wales Borderers had been thrown

into the fight that the hills were cleared up to the high cliffs on the left bank of the Aq Su. All resistance on our bank of the river then ceased.

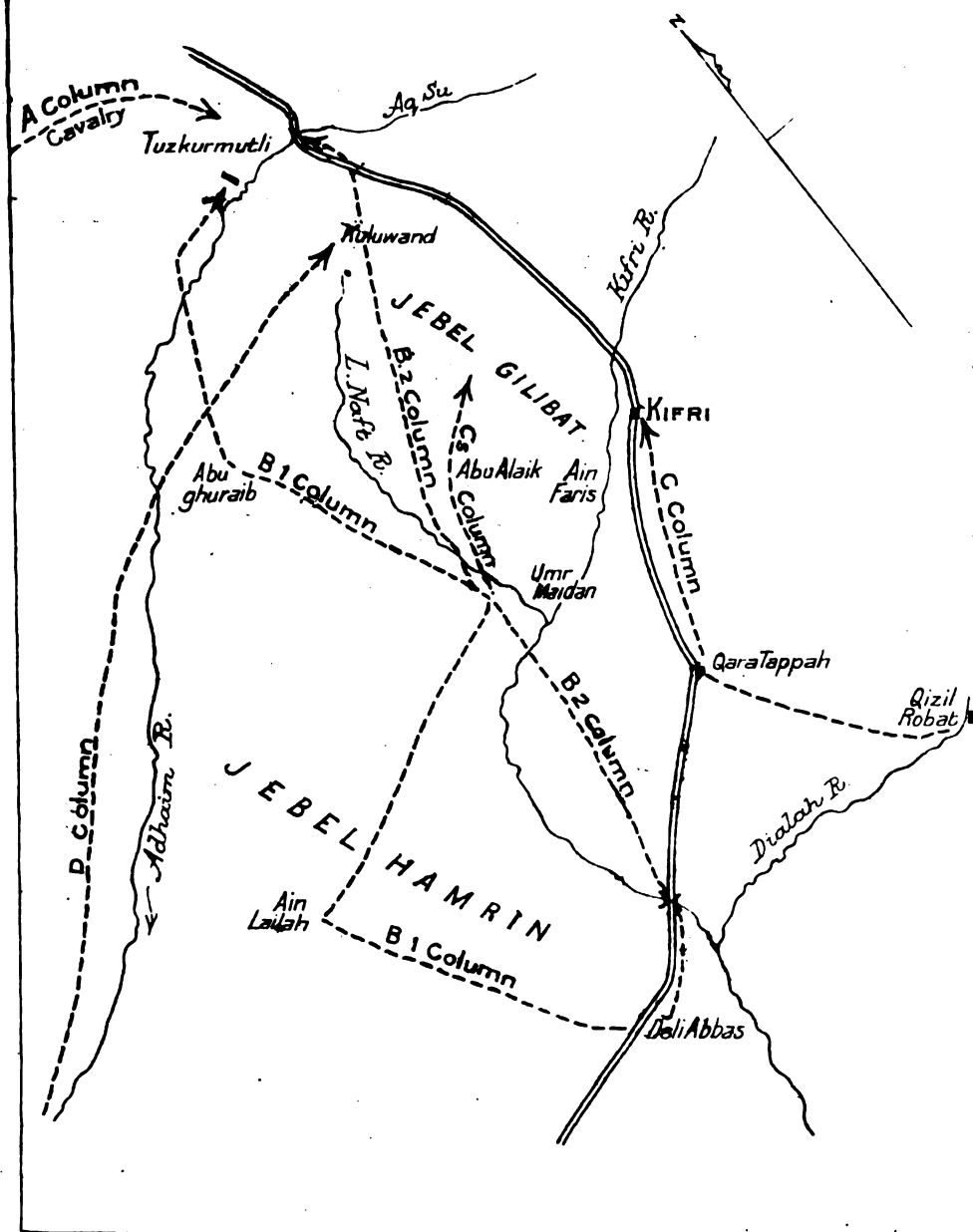
On the far side of the river, however, the fight still raged furiously. From our elevated position we could look down on the Turks' position, which encircled the town. Their right was thrown back on the hills, and their left forward on to the right bank of the river. We could see the long lines of the 38th Brigade sweep forward while the Turkish trenches were smothered and blotted out under a rain of shrapnel and high explosive. Ever nearer crept the advancing lines, their bayonets flashing in the sun through the dust and smoke of the battle. Suddenly the entire brigade flung itself on the Turks, who, disdaining the shelter of their trenches, rushed out to meet them in the open, and a bayonet fight ensued, in which our men soon proved their superiority. After a stubborn fight, the Turks gave way, and either fled or surrendered in droves.

The battle was over. For several days afterwards stragglers were gathered in by the cavalry and armoured cars, which, ranging far and wide in rear of the Turks, prevented all escape. Practically the entire Turkish force was destroyed. The total bag for the day amounted to 1,800 prisoners, 12 guns and 10 machine guns, in addition to severe losses in killed and wounded.

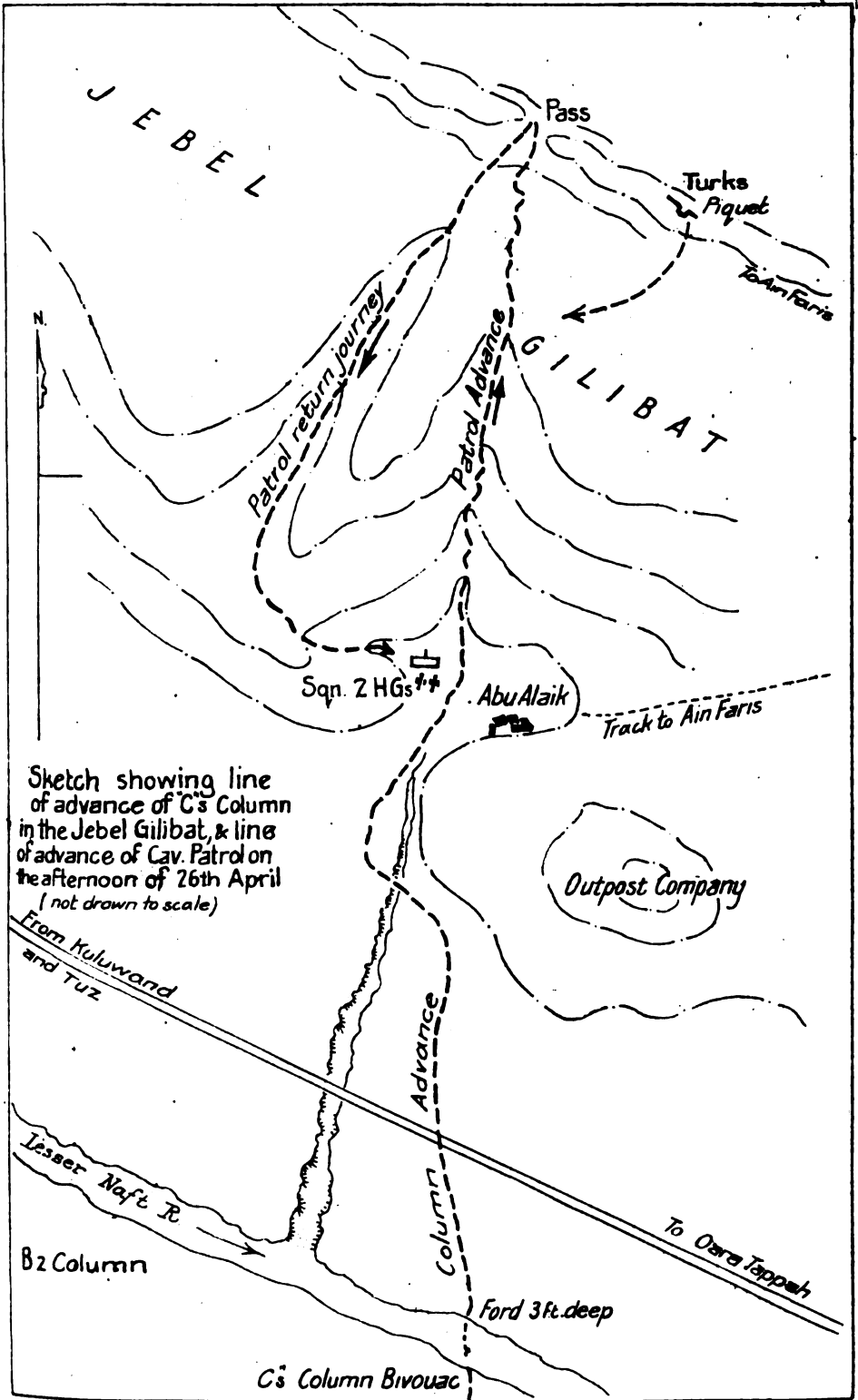
Our battalion was ordered to detail one company to guard the prisoners for the night, and, as many of their officers could speak a little French and Arabic, we were able to obtain a certain amount of information from them. They had been fully informed of our movements for several days before the advance took place. Their leaders decided that they could not resist us in their scattered positions, and accordingly ordered a concentration where they could delay our columns until the arrival of the promised reinforcements from Mosul, when the British Army was to be driven back to Baghdad. Orders were received for them to hold on at all costs, and the severity of the fight, and the number of their casualties testified to the loyalty and devotion with which they carried out their orders.

Operations in this part of the country now ceased for the season, and the troops were dispersed into hot weather quarters.

SKETCH "A"



SKETCH "B"



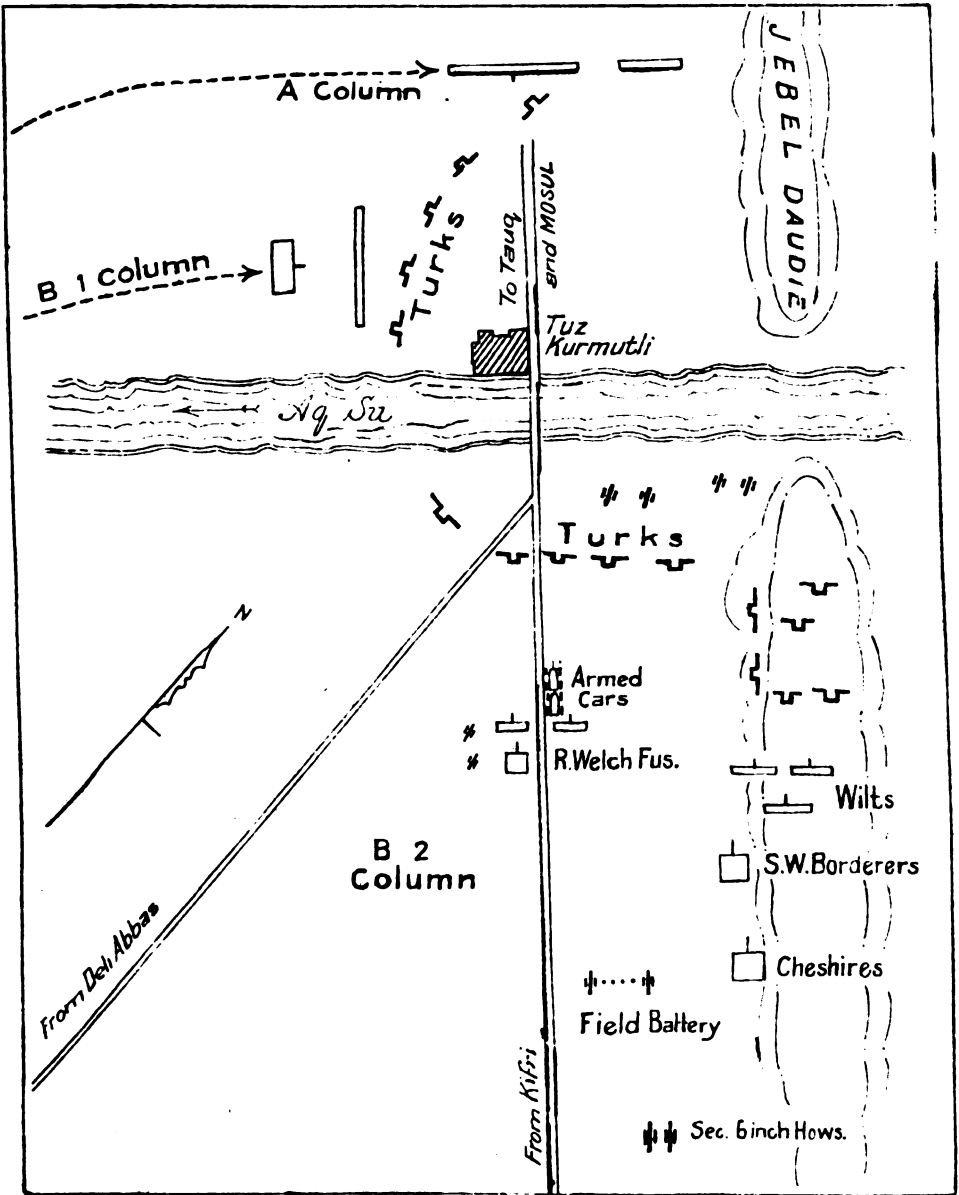


Diagram (not drawn to scale) of the Battle of Tuz Kurmutli
30th. April 1918.

B.1. Column is attacking from the South West, and B 2 Column from the South East. The leading battalion (R. Welch Fus.) of B2 has fallen back near the road. No. 2 Battalion (Wilts) is clearing the hills, No 3 (S.W. Bs) is in support and No 4 (less one company) (Cheshire) in Reserve close under the hills. Armoured cars are in action on the road level with the leading (No. 1.) Battalion.

GENERAL REMARKS.

I. This operation affords a good example of enveloping movements on exterior lines against a scattered force acting on interior lines. The *widely* extended march of the flank columns left the Turks with three alternatives, viz.:—

- (1). To accept battle where they stood, and risk defeat in detail.
- (2). To concentrate at least a portion of their forces in some central position and attack our columns in detail.
- (3). To fall back and concentrate and risk all on one decisive battle.

They adopted the third course.

If it was really true that they had complete information as to our movements several days ahead of the moves, it would seem that their easiest plan would have been to adopt the second course, and attack our columns in detail.

The final concentration and movements of our columns is of interest when they found that the Turks had slipped away and had fallen back.

II. The excellent cable communications between columns and headquarters contributed largely to the success of the final concentration.

III. The attack of the advanced guard of B2 column during the night advance to the left bank of the Aq Su is a contingency that must be taken into consideration in all night movements in the face of an enemy. It might have been better to have kept the mountain battery with the main body.

IV. The leakage of information has already been mentioned. A great deal was given away at the supply dumps, where future moves were of necessity known well in advance. Every Arab in the country was a potential Turkish spy.

THE IMPRESSIONS OF A COMPANY COMMANDER DURING BRIGADE TRAINING IN EGYPT, FEBRUARY, 1925.

By

CAPTAIN R. J. TUKE, 1ST BATTALION, THE BUFFS.

I.

A company commander in an infantry regiment during brigade training, or the training of any larger formation, is a person of comparatively little significance. Yet he is, by virtue of his appointment and by the active use of the horse with which he is provided, able to see a good deal of what is going on. Possibly he is in an even better position to observe the situation from every point of view than officers holding higher appointments, for not only is he able to appreciate the effects of what may be called minor strategy, but he can see more clearly than anyone else the actual working of a limited number of cogs in the military machine for he is a cog himself and quite a small one, too. Those higher in the scale can hardly be described in this way, for a battalion commander is, to carry on the metaphor, the hub of one of the wheels in the machine.

The three weeks' training which provides the subject of this article took place in the area about Ma'adi, outside Cairo, and later in the Macquttum Hills towards Abbasia.

The country in the area about Ma'adi consists of a conglomeration of flat, open wadis; broken hills and ridges enclosed on the one side by the perpendicular side of the Macquttum Plateau and on the other by the very steep, and in places almost unclimbable Dejli Ridge whose peaks dominate the confused sub-features below.

The whole area is entirely devoid of any vegetation except for hungry looking tufts of coarse grass that offer no cover or impediment to view. Nowhere in the area, where the operations under discussion took place, are the hills very high nor the wadis very deep, yet—so confused is the country—it is perfectly easy to carry out operations of a nature varying from set-piece attacks as envisaged for the next big war to mountain warfare as practised on the North-West Frontier of India. An additional advantage is the fact that nobody need bother about trampling down hedges, destroying crops, or interfering in any way with anybody else's interests, for there is nothing to destroy. It is all just barren and baked. People may write and talk about the "lure of the desert," but it is difficult to see where any lure

can exist in this area, at any rate, unless, indeed, it is a lure to keen soldiers to practise the art of war untrammelled by fears of big bills for damage! But enough of this inhospitable country: we must get on with the war.

When the time comes for a company to take its place with the rest of the battalion for field training, or for a battalion to join the remainder of the brigade for the same reason, and for the brigade to march out as part of a division to take part in manœuvres, surely in the heart of every commander, whether he be commanding a company or a division, a certain feeling of anxiety exists as to whether all is as it should be. And, no doubt, the bigger the command, so much the greater must the anxiety be. It is not only because bowler hats are so easily come by in these hard times. It is something less material than that. It is a feeling of anxious keenness that his particular command should put up 'a good show'—and a better show than anyone else.

Now will the fruit of N.-C. O.'s training be seen, thinks the company commander. Has he managed to drum into the dull heads of various lance-corporals he knows so well, the proper way of giving fire orders? Is he perfectly certain that Sergeant What's-his-Name knows the duties of a piquet commander? And has he really covered all the ground during company training so that every man knows instinctively what to do whatever may happen? Of course he has not. But if only he had had another fortnight, then all would be well. Confound fatigues, confound all guards, confusion to all garrison duties that take his men, thinks he, and limit his training period. Abolish the lot, he says, and let soldiers be soldiers. Thus a thousand and one doubts and fears assail him—and he just an insignificant company commander. How much greater must be the agony of mind of those above him! But standing on the brink is always far worse than taking the plunge. In the same way will the commander find that things are not so bad as he thought they would be. Behold! Lance-Corporal So-and-So actually gives his fire orders correctly, and Sergeant What's-his-Name digs an ideal position for his piquet. What splendid fellows they are, muses the company commander, as he smiles to himself. Everything has turned out all right after all.

II.

It was pointed out in the last chapter that the area under review is exceedingly bare, but that nevertheless this was no bar to the practice

of a very varied number of exercises over the same ground without the area becoming unduly familiar. Another advantage the ground possesses is the good number of vantage points from which an operation may be watched by considerable bodies of troops. From what has been written it may appear to the casual reader that the ground is too easy for a scheme of attack and defence to be carried out simultaneously without losing a good deal of value. But this is not so, for the ground is full of diminutive folds, slight undulations and little nullahs—even on its barest and most exposed portions—so that a clever section commander can frequently lead his men forward, and be quite hidden from view from any troops dug in and lying low in the natural defensive positions which abound. Any defensive troops that failed to lie low would, of course, themselves be exposed quite clearly to the attackers. Troops clothed in khaki drill would certainly be very difficult to pick up, but on this occasion training was carried out in serge.

As the chief duty of infantry is to attack (for even if they are on the defence in the end they must attack to be successful), and as their chief object must be to close with the enemy in a hand-to-hand combat, a good many days were spent in solving the problem of how to get over the intervening space and at the throats of the defence.

On one occasion a battalion of the brigade gave a demonstration attack with ball ammunition on a feature dubbed 'the Sphinx' whilst the other three battalions perched themselves about Peak Hill on the end of the ridge Tel el Gasusat. From this vantage point it was possible to follow the battle from beginning to end. Those who have attended brigade or divisional training in England recently will doubtless be quite familiar with the latest attack formations, but even if they are it is contended they could not have failed to learn something from this most excellent demonstration. Here we were able to see the battalion, as it breasted the slope, open out quickly from column of route to artillery formation, each platoon marching independently, as it seemed, yet actually still under the control of the battalion or company commander. As the leading two companies drew closer to the position, platoons shook out into section groups in file, each section making use of every depression or nullah that offered cover.

A defensive position is selected with a view to fulfilling many functions, the main object being, of course, to stop the enemy advancing. Now the best way to stop an advance is to kill your enemy when he is still some way off, therefore the ideal position has a good field of fire. This statement is so obvious that it seems almost superfluous to make it, but it is made for this reason. When it is no longer possible for the attackers to advance by making use of the cover afforded by the ground then they must make their own cover. In other words, they cover the advance with fire. It was a good object lesson to observe how this battalion carried this out, and was a splendid demonstration of the use of Lewis guns.

A demonstration, or practice attack, carried out with ball ammunition sometimes has the effect of rather limiting the exercise, and there is always the danger of troops advancing in an unpractical formation (such as keeping too rigid a line), in order to ensure safety from bullets, but in this attack this cramping did not arise for the dip of the Wadi Digla and the rise of 'the Sphinx' beyond enabled a ceaseless fire to be maintained until the forward attacking troops came close upon their objective. Incidentally this is a lesson to the defence not to occupy a position where such a state of things is possible. For if it can be done in peace, how much easier would it be in war? and yet when we occupied the very same defensive position on a later occasion it was considered strong enough. One is tempted to write with Robert Burns.

"Oh wad some Power the giftie gie us

To see ourselfs as ithers see us!

It wad from many a blunder free us."

It seems time now to leave this demonstration battalion to carry their battle to victory and consider a matter that seemed always to be cropping up towards the end of nearly every attack that took place, whether the whole brigade was taking part or only one battalion.

Military thought and action appears to move in cycles, or like a pendulum. For instance, in the Great War when bombs began to come into every day use most of the army forgot how to use the rifle with the ludicrous result one sometimes heard of a man chasing a German across open country and throwing grenades at him as he fled, while the rifle which the pursuer held in the other hand remained loaded, cocked but unused, with the result that the German escaped, and the pursuer got a 'blightly one' from his own bomb.

At one time, too—and not so long ago either—it was considered good tactics to advance against an enemy position in long, straight, extended lines of men varying from two to five paces apart. Some hundred to two hundred yards behind the first line would come a second in similar formation, and behind this line yet another at about the same distance. Starting the attack at a distance varying from, say, eight hundred yards to fifteen hundred yards the serried ranks would rise by sections and rush furiously forward for thirty or fifty yards, each man flinging himself prostrate on the ground on the word of command of the section commanders. Sometimes, even at long ranges, whole platoons would rise and fall together. Meanwhile the whole of the rest of the line would open fire on the enemy position. Fire and movement with a vengeance. As the forward line approached more closely to the enemy (say, within three hundred yards) the real fire fight would start in earnest, everyone blazing away as hard as he could. When it was deemed that the front rank could get no further, then up came the second with a rush, the second rank men falling panting in the gaps left between those of the front rank. This was called thickening the firing line. And the heavier the enemy fire, so much the thicker became the line in that locality, for the necessity of gaining superiority of fire was impressed on all ranks. After a little while, when the fire of the attackers was judged to have sufficiently cowed the enemy, up would get the sections again (having been previously re-told off by N.-C. O.'s who were evidently in some marvellous way supposed to know every man in the battalion by name), and rush forward from the now crowded line for another twenty or thirty yards. In this manner, by degrees, these gallant but thoughtless men would arrive to within fifty yards or so of the enemy position. Momentarily a pause would be called while these now sweating and rather breathless heroes fixed their bayonets. Then of a sudden up would rise the whole long line, and with frantic yells and cheers would charge with gleaming bayonets on the now demoralised and wavering enemy. Thus would the position be carried with glorious élan to be followed soon after by the welcome sounds of the "Cease Fire." And many a battle was won that way in peace time, at any rate.

In recent years, however, tactics in the attack have altered a good deal, for the introduction of Lewis guns and the increase in the number of machine guns in each battalion has increased the fire power of a

battalion so enormously that it is no longer necessary to cram men into the firing line to gain this most necessary superiority of fire over the enemy. Moreover it has been found by the hard and costly experience of modern war that it is not by beating fruitlessly, with ever-increasing forces, against the strongest points of resistance that success may be achieved, but rather by pushing through, with every ounce of energy, where the enemy has been found, by sheer fighting, to be weakest that the road to ultimate success lies. But it does not do to stress this too strongly for here hangs another little pendulum. In this recent training it was impressed on all ranks that they must fight hard against whatever they might meet, and on no account must anyone attempt to rely on his neighbour to find the weak link in the chain. Only by hammering it everywhere would it eventually crack somewhere. This, of course, is minor tactics, and quite distinct from strategy whose province it is to locate the weak point if possible.

Now in the book (F. S. R.) it says that the climax of the attack is the entry of the infantry into the enemy main position and the annihilation of the enemy there in the hand-to-hand combat which follows. But it is in the very interpretation of this precept that the pendulum is very inclined to swing in such an opposite direction to that described in the last paragraph but one of this article. No longer do infantry advance in long serried ranks, but each section moves forward independently under its commander, but at the same time in close touch with its neighbours. At first a company will advance in artillery formation of platoon groups. As soon as the platoon commander considers it advisable, owing to increased artillery fire, he will order out his sections into groups. As they in their turn come under rifle or machine gun fire, they open out into an irregular line extended at intervals of three to five yards (or even more in very open country) between each man. Long before this the company commander will have lost all control over his advanced troops (*i.e.*, two platoons provided he starts with two in advance and two in support—the most usual way). And the platoon commander will be fortunate if he is still able to control his two foremost sections (taking it for granted that he is advancing in the same formation in miniature as his company commander).

Calling a halt a moment, just before the final attack is made, it is of interest to survey the forward part of the field of battle as

though from a captive balloon. This is the picture that one battalion will present: on the right will be seen an extended section of riflemen in an irregular line, but each man able to use his rifle. Thirty to fifty yards to the left will probably be seen another rifle section, or it may be a Lewis gun section. On the next feature, or convenient place from which fire can be brought to bear to support the leading sections, and anything from fifty to two hundred yards in rear, will be observed the other two sections opened out but some way apart from each other. Thus it will be noticed that a platoon does not occupy a line but an area. The exact size of the area it is impossible to say, for it is a question always open to argument and impossible to lay down dogmatically. It all depends on the local situation, and this is a phrase that holds good for the whole battalion under review. The platoon on the left will be disposed in a similar manner. It may be quite close, but very possibly some distance off—even two hundred yards or more. Beware of laying down fixed distances!

The company to the left will be in the same kind of formation as its neighbour. For the purposes of this discussion it is not necessary to consider the position of the support and reserve companies.

In order to have something fixed to work on it is necessary to lay down just one figure, but it must be remembered that this figure is only arbitrarily fixed in this one case. There is really no reason, provided the situation allows it, why it should be not greater or less. But in this case the frontage of the battalion is said to be a thousand yards.

Presuming that the attack is being made with two companies forward, and that the formation of both these companies is the same, it will be seen that on the whole front the very foremost troops will consist of eight sections. Estimating each section to be composed of six men, forty-eight men will therefore cover the whole front—and this is a liberal estimate, for casualties during the approach will probably have thinned the ranks to a good deal below this figure.

The time has now come to get in with the bayonet and, as the book says so optimistically and cynically, annihilate the enemy. Nothing daunted and full of ardour the battalion we are observing from our eerie perch aloft gaily advances with fixed bayonets on the forward defences of the enemy-posts no doubt well dug in and manned by what is left of platoons, perhaps twenty, but possibly only half a dozen men. At least, when it is said that the battalion advances, it

would be more correct to say that forty-eight stout hearts leap forward—forty-eight on a thousand yards! What are the rear sections of the forward platoons doing? Why, covering the advance of the forty-eight with rapid fire from rifles and Lewis guns, of course. And what are the rear or support platoons of the two leading companies doing? Manœuvring to a flank, or working up along dead ground, or may be moving up to reinforce the forward platoons, or they may even be lying in extended order and helping to swell the volume of fire directed against the foremost enemy positions. So it will be seen that the actual fire effect produced against the wretched enemy is truly colossal. But what is the fate of the forty-eight? We will imagine that by good fortune, and the weight of musketry that covers their advance, they reach the enemy positions unscathed. Now the real grim hand-to-hand conflict begins in earnest. We will follow the fortunes of one section. After working their way painfully forward over the heavy ground, (heavy sand in Egypt, heavy mud in Europe), they throw themselves panting into the enemy trench, which they find occupied by, say twelve, determined men. We will leave them for the amount of time it takes to advance encumbered with a Lewis gun and equipment over a hundred to two hundred yards, and consider what the supporting sections of the foremost platoons are doing. Immediately these sections see that their comrades in front have entered the enemy's position, up they get and stagger indomitably forward to their assistance, covered by the fire of the supporting platoons. Remember while they are coming up the forty-eight are fighting tooth-and-nail to kill or eject the enemy from his position, and until they do arrive, are outnumbered.

The history of war gives many examples of failure in the attack owing to insufficient weight by the attackers at the critical moment. Think of Pope at the Second Manasses; think of Napoleon at Waterloo with Grouchy's troops adrift; think of Suvla Bay; and, above all, remember Paschendale!

To return to our section fighting manfully against locally greater odds. The effort of advancing those last four score yards or so will have put them at a disadvantage compared with their enemy who has probably not had to run about at all. Now until the supporting sections arrive they have to bear the brunt of the whole battle unaided. It is easy to foresee the possibility of the supporting sections finding their comrades already killed or out of action. If they do they will

be in almost as sorry a plight as their predecessors, for they will have to fight single-handed until the supporting platoons come to their assistance. With no bullets, and no wire or other obstacle to impede them, the time that these very local supports have been actually observed to take was not less than five minutes. It is well to bear in mind, too, that these support sections will probably be Lewis gun sections—and a Lewis gun, as every one knows, is nothing but an encumbrance at close quarters.

The living picture we have been observing from our balloon is a picture of the pendulum swung to the very opposite extreme of that described earlier in this chapter. Something is evidently wrong, but it is an error that is often made. A critic may say that such a state of things could not happen in war, to which the reply can be made that what is practised in peace will undoubtedly be tried in war. It is the precept of attack in depth carried to the point of absurdity. It is an evil easy to guard against and only drawn attention to here at such length because it has actually been observed to occur on several occasions.

III.

The, perhaps, rather lurid picture drawn in the last chapter was not intended to be that of a deliberate attack on a well organized and long prepared position like the Hindenburg Line, but the early stages of a battalion pushing forward against what may be described as outworks such as the Germans occupied in the neighbourhood of Liéramont in September 1918. Certainly not trench-warfare, for practice in such arts is rightly barred nowadays, but something rather more fluid.

The observations made in this chapter are the result of a field day during training when half the brigade was acting as an advanced guard to an imaginary force whilst the other half played the rôle of rear guard to an equally mythical body. But it is mainly with the exploits of the van guard that this chapter will deal.

The advanced guard consisted of a force of all arms: cavalry, section of a field company R. E., horse artillery, infantry, signals and aeroplanes. The numbers in each case are of no importance, for it must be remembered that these are only the impressions of a company commander the extent of whose view, whether in peace time exercises or in war, is necessarily limited by the narrow horizon which surrounds him, and whose attention is mainly occupied by the trivial events that take place within his ken.

In order to save much weary marching over heavy sand, and to devote as much of the available time as possible to the practice of the actual exercise on the programme, it was essential for the other side to occupy a position as near camp as possible. This imposed the unavoidable disadvantage of compelling the advanced guard to deploy in the early stages of the advance in rather a cramped manner, so that the infantry soon found themselves under the enemy's fire almost as soon as the cavalry had located them ; for the enemy were occupying the western extremity of Tel el Gasusat, not more than a mile from camp. However, except for this initial bit of unreality, the day's exercise was very interesting and most instructive.

Tel el Gasusat is a low, long, narrow feature whose flat, broken, and rocky western extremity widens out before sinking steeply into the undulating sandy area over which the advance guard had to move. The north-west end is a tumbled heap of small boulders and rubble amongst which can be found excellent cover for scattered parties of riflemen who, on this occasion, made full use of this feature and were most difficult to locate. No doubt, though, had the artillery been firing live shell the defenders would have found splintered and flying fragments of rock unpleasant companions to shrapnel and high explosive.

Very soon the advancing infantry came into contact with the enemy lying up in these loose stones, but continued to advance, in spite of a brisk fire, to within about 150 yards of the position before being stopped by the umpires who told them they could get no further for ten minutes. As many were lying in the open without any protection whatever there can be no doubt, that had the fight been a real one, they would have lain there until buried, for it would have been certain death for even those under cover to show themselves. Nothing could, therefore, be done on this sector although one company—galled at lying prone so long and bursting with impatience to get on—made a valiant effort to carry the position by storm. Hardly had they started, however, than they wilted before a storm of invective from an alert umpire. Shortly though, the position improved as another company further to the left, advancing up a shallow wadi, changed front and outflanked the enemy, causing him to retire and melt away behind the confused heaps of stones in his rear. The companies that had previously been held up were then allowed to advance. At this time a very interesting and realistic situation arose, a situation that might well happen in real war.

The north-west corner of Tel el Gasusat, it will be remembered, is a broken heap of boulders, but further along to the south the side of this feature is much steeper and more difficult to climb. The consequence was that the company opposite the north-west corner was able to occupy the position much more quickly than those further to the right. No doubt the enemy appreciated this too, for he did not withdraw from the cliff edge until later. Thus the commander of the company who first effected a lodgment on the toe of the ridge had to solve the problem as to whether he should go on chivvying the retiring enemy on his front over the rubble in the hope that the enemy two hundred yards on his right flank, but cut off from him by a small sheer cliff, would subsequently retire on seeing their line of retreat threatened, or whether he should halt, change front and make quite certain of the immediate safety of his command. The first idea, if successful, would undoubtedly achieve a greater result than the alternative scheme. But anyone advancing under such conditions would be bound to feel rather anxious about his right flank. So would the enemy about *his* right. The commander of the advancing company would be tempted all the time to glance over his shoulder in the hope of seeing his comrades scaling the heights on his right, and putting the enemy to flight.

“Never take counsel of your fears” wrote Napoleon, and this is undoubtedly what anyone would be doing if he took the alternative step.

The Company under consideration re-organised and went forward. The enemy company on the right retired, so all was well.

But it is a very different thing to decide on such a course in a mock battle from the real thing, when on the decision hangs, perhaps, the fate of many lives and even, possibly, the difference between winning or losing a battle. In war great results hang on slender threads. Moreover, during training, one side knows very well that it is detailed that day to advance, while the other side knows equally well that its part in the play is to retire. Nevertheless excellent practice.

Having followed the fortunes of this company so far, it is, perhaps, worth while to follow them a little further as they pursue the enemy.

Even as it is the function of a rear guard to delay the enemy by breaking off the engagement at the right moment—as history shows, the most difficult of all operations in war,—and retire sufficiently

far to induce the pursuers to reform column of route before again opposing their advance, so it is the duty of the advanced guard to follow so closely on the enemy's heels that he is never unharassed a moment, and thus gets no opportunity of re-organising or occupying a fresh position.

Tel el Gasusat, it must now be explained, is fairly flat on top being broader at the western end (that from which it was being attacked), and narrows down considerably at its eastern extremity (Peak Hill). From Peak Hill there is only one way of retreat in an easterly direction, and that leads down a steep and narrow path into the gorge of the Wadi Digla below. Anyone, therefore, being driven eastwards would be compelled to use this narrow defile down the steep side of the hill and would be an easy mark to any machine guns, artillery, or even riflemen if they were sufficiently far advanced, occupying the comparatively flat country immediately to the north.

The situation at the exact time under review was somewhat as follows:—On the right, or south side of Tel el Gasusat the enemy were retiring slowly, some of them, no doubt, finding their way down into the wadi on the south side by the various paths in that locality. To the left was the company we are following pursuing the enemy towards Peak Hill, but still struggling over the difficult and broken piles of loose stones in their path. On their left, it appears, the enemy were already evacuating the open plain and were retreating either towards Aaron's Gorge in the Macquittum Hills (some 2,000 yards or more to the north-east) or towards the 'massif' of underfeatures crowned by the "Sphinx," (800 to 1,000 yards east of Peak Hill). Thus it will be seen that the lot of those troops retiring on Peak Hill was, like the policeman in the song, not a happy one. Eagerly the company we are following was pressing after them like a pack of hounds racing to kill their fox before he is able to get to ground. But at that moment one of those unfortunate episodes occurred of which one reads so often in the history of war. Orders came from higher authority for the company to re-form on the track on the north side of Tel el Gasusat. However, no matter how irksome or annoying they may for the moment appear, orders must be obeyed, for the higher commander is in a better position, nay, the only position, to appreciate the situation as a whole. When flushed by the joy and excitement of the chase it is indeed difficult sometimes to come to heel, but if everyone

did as he liked chaos would soon reign supreme. And so the pursuit was stopped on this sector, and as many of the company as possible collected on the road—but some could not be stopped and were not seen again that day—a good object lesson of the difficulty of control when once troops are launched in the pursuit.

It may be contended that there are enough real battles from which to draw a salutary lesson without bothering over much about the paltry minor engagements of mock encounters, but yet frequently in peace there is more to be learnt of war than in war itself, paradoxical though it may seem. War, it cannot be gainsaid, teaches many good lessons—many wrong ones, too—but it is only by practising and studying war in the piping times of peace that real value can be gained. So it would appear worth while studying the possibilities offered, but yet denied, in this corner of a dummy battle.

Suppose for a moment that no order to re-form on the track had been issued. How would the battle have fared?

At the time this company was stopped it was surging forward, ahead of the rest of the line, in close pursuit of the enemy. Very soon the retiring forces—consisting, as far as could be gathered, of about two companies—would have been compelled either to turn at bay like a cornered stag, or they might have tried to escape by the one and only exit, defended by a weak rear party (in which case they would have suffered heavy casualties, if an umpire had been handy) or they might have surrendered—an almost unheard of contingency in peace time. Therefore the last alternative may be ruled out. Supposing they turned at bay. As the pursuers would necessarily be somewhat exhausted and disorganised, at first they would hold the advantage, and by delivering a speedy counter-attack might have utterly destroyed their antagonists—umpires, of course, permitting. But we must credit our umpires with imagination, for it is only by employing to the full a vivid imagination that umpiring can successfully be carried out. Here we may well call history to our aid to help answer the riddle. Two instances of pursuit by small bodies occur—the one successful beyond all hope, the other an utter failure. Those who are conversant with the history of the battle of the Yalu will remember how the fifth company of the 24th Regiment of the Japanese 12th Division pressed forward in advance of its comrades, and against temporarily enormous odds, sat on the cork that stopped the neck of the bottle at

Hamatan, thus causing a whole brigade of Russians, with many guns, eventually to surrender after suffering terrible casualties. This gallant company suffered terribly, too, but by pressing on, regardless of what the rest of their battalion were doing, they turned what might have been a successful retreat into utter carnage and disaster.

The unsuccessful enterprise is that of the 5th Norfolks, with the King's Company, under the command of the gallant Sir Horace Beauchamp, in the ill-fated attack towards Kavak Tepe near Suvla on August 11th, 1915. Those who read will learn how this gallant soldier led his 250 men forward to the very foot of the hill. But nobody else followed, so he and his glorious band disappeared into the scrub of the jungle never to be seen again.

But because he lost, because he was unsuccessful, is no reason for saying he was wrong. Not at all. He was right while others were to blame, for they were unable to follow the lead he and his brave soldiers gave them.

To revert to our subject, which is indeed puny and flat when compared with such deeds of self-sacrifice and heroism, it would seem that such records, whether successful or not, teach us at least one good lesson:—When in pursuit press on ruthlessly. Harry and annoy the enemy like a dog worrying sheep. Keep him moving, or pen him into a corner till he is as helpless as a herd of cattle driven to the slaughter-house—and bear in mind that reinforcements are coming up behind, all the time drawing closer.

That is the answer to the riddle.

IV.

Having considered in the last two chapters various phases in the deliberate and encounter battles, it is proposed to close the review of this phase of training by examining the role played by non-commissioned officers.

It used to be a common phrase before the Great War that N.-C. O's. were the backbone of the army. As the war grew older the good old type became more and more rare owing to casualties, or the promotion of many of these men to commissions. So that after a while it could no longer be said that N.-C. O's. were the backbone, for in many cases young officers—and the old promoted N.-C. O's.—had to do much of the work that was formerly considered to come within the sphere of N.-C. O's. But now, probably everyone is agreed, the type has

re-asserted itself. The N. C. O. has again stepped into his proper place, and is the well-trained, smart and soldierlike model that is so essential in a small army like ours. A non-commissioned officer nowadays, though, has to know a great deal more than ever before. Not only has he to be able to instruct his men in several more weapons than formerly, but the more open and independent tactics of today have very greatly increased the importance of even the most junior lance-corporal possessing a greater degree of tactical knowledge, initiative, and resource than in the past.

Think of the difference in the attack. In the old advancing-by-rushes-in-long-lines days about all a section commander had to think of was telling his section, or men about him, when to advance, and to give correct fire orders. But now it is very different, for from the moment a platoon opens into artillery formation until the final objective is reached, the section commander is the only man able to control it. No longer does he merely have to lead them blindly across the open in sudden spurts, only making use of what cover may be found on his immediate front. Nowadays, if he wishes to be successful, he must employ cunning and scoutcraft. He must look ahead and develop an eye for country. He must know when to advance and when to support the other sections of his platoon by fire. He must judge for himself whether to save time by making a dash for it across the open, or whether it would be better to creep up under cover of some under-feature. He must be proficient in the writing of clear and concise situation reports to his platoon commander. He must be prepared to hang on alone in some captured enemy post. And above all he must inspire his men with energy and resolution throughout the battle. Nothing new in this, though, all those things, and a score more, he must do alone and unaided with no officer to assist him. Small wonder that the finding of really good junior N.-C. O's. is so difficult a task these days! Nevertheless they can be, and are found, in any efficient company. Moreover they respond to the trust placed in them splendidly, and seem to enjoy the greater tactical freedom granted.

The terrific power of modern weapons, from howitzers to rifles, has imposed this modern form of tactics upon us, and there can be no doubt that the present day formations in the attack render the difficulties of the defence at least just as great as the practice of defending an area by groups sited in depth relatively increases the complications of the offence.

With regular soldiers in whom the habits of discipline have become as second nature-habits, be it noted, grown only by paying the utmost attention to turn-out and drill from the day of joining—the difficulties of learning these new tactics may be, and are, mastered, and would no doubt lead to success in war. But it is a question whether more raw soldiers—the levies of war—who would necessarily not have so highly trained officers or N.-C. O's. to lead them and train them would be able to carry out their part successfully. Not, let it be hastily added, because they would be unable to learn the intricacies of the game, for the idea would be quickly absorbed. But when they came to the hard, grim test of battle they might fail. And if they did, it would be from one cause only—they would not have had time to acquire the essential habits of soldiers. Habits—let it be stressed once more—learnt only on the barrack square.

If there be any who disagree with this statement, let them call in history to convert them. The story of Suvla Bay, the reason of our failure at Loos, the tragedies of the North-West Frontier campaign of 1919 can all be attributed mainly to one fact—lack of that chief and most important quality of a soldier—discipline.

SOME MORE EARLY ARTICLES OF WAR.

By

CAPTAIN H. BULLOCK, I. A.

Those who read the early codes regulating military discipline, * and found them of interest, may perhaps like to know of some other documents of the same type. Three of them are therefore printed here. Of these, one has never before been published; and the other two, though they have been printed before, are not only inaccessible to the soldier but difficult of access to the student.

The first one is dated 1573 and was issued by Sir William Drury, who commanded Queen Elizabeth's troops which were then advancing to attack the Scottish capital. In its original form it was a printed broadsheet proclamation, on a single sheet of paper, of which hardly any copies have survived. There are two in a volume of MSS. in the Public Records Office in Chancery Lane, † and another in the British Museum ‡. As far as is known it has never been reprinted. It reads as follows:—

Forsomuch as Sir William Drury Knight, high Marshal of Berwick and General of the Queen's Majesty's forces Munitions and Artillery, by land as by sea, is to enter the Realm of Scotland, to aid and assist her highness' good brother the King of Scots, for the expugnation of the castle of Edinburgh holden and kept by certain rebellious persons against the King their Sovereign, Regent, Authority and Nobility of the same Realm of Scotland.

* * * * *

And for that the said regiment of Englishmen so entering the said Realm of Scotland, shall not use in the same journey any disorders either amongst themselves or to any Scottish person or persons during their abode there. The said Sir William Drury Knight doth straightly charge and command all and every person and persons of what quality soever they be under his charge to observe and keep all such Articles as hereafter doth ensue, upon pain of most rigorous punishment according to the quality of the fact committed.

* *Journal of the U. S. I. of India*, April 1927.

† P. R. O., State Papers Scotland, 25, fols. 22 and 23.

‡ B. M., Cotton MSS., Caligula C. IV, fol. 55.

That is to say,

First.—That no English person or persons shall misuse any Scottish person or persons in word, deed or countenance ; but shall use all good and friendly dealing upon pain of most rigorous punishment according to the quality of the fact or trespass committed.

Item 2.—That no English person or persons shall spoil or take away from any victualier or other person in market, going or coming by the way to or from the market, any victuals, money, or goods violently without payment upon pain of death.

Item 3.—That no soldier shall purloin or steel any kind of armour, weapon or furniture from his fellows or from any other of that regiment upon pain of death.

Item 4.—That no soldier of that regiment shall quarrel, fight or make any fray with any of their own regiment or others upon pain of ten days' imprisonment and open punishment.

Item 5.—That no soldier shall depart or run away from his or their Captain and Ensign upon pain of death.

Item 6.—That no soldier shall lie forth of the quarter that shall be appointed unto him by his Captain and Officers, upon pain of ten days' imprisonment and open punishment.

Item 7.—That no soldier shall depart from his watch or ward where he is appointed during the due time without leave of his Captain or Officers, upon pain of death.

Item 8.—That no man shall entertain or keep any servant or boys furthe (?) of pay, other than such as they will answer for, if any complaints be made against them by any person, upon pain of punishment as well to the Masters that keepeth any such, as to the offenders.

Our next illustration is not of English origin, though it was preserved in English hands for nearly three hundred years before it was printed for the first time. It is of peculiar interest as it is a code of military law evolved by a mutinous section of the Spanish Army in the Low Countries in the year 1603, and shews that even mutineers must adopt a system of discipline for their own ends. "The wheel comes full circle"; no sooner do mutineers shake off their masters'

discipline than they have to lay down and enforce a system of their own. (An account of this mutiny may be found in Motley's *Dutch Republic*, vol. iv, pp. 93—97 ; or in Dalton's *Life of Sir Edward Cecil*, vol. i, p. 95 ; though neither of these writers mention this code).

This extract is taken from the report of the Historical Manuscripts Commission on the MSS. of the Duke of Rutland, first published in 1888, and reprinted in 1911. The punishment of hanging an offender in a basket from a gibbet is nowhere paralleled, or even imitated, in military law, it is believed.

A brief discourse of the politic regiment, and articles kept and observed by the mutinous and factious of Hoochstrate.

The said seditious and factious are at this present esteemed by men of credit to be about some sixteen or seventeen hundred horse and 3,000 foot strong. Being joined together, they took an oath upon a certain cross appointed for that purpose, to keep all their rights and ordinances upon these pains following, namely :—

- (1) That he that shall sell or make away his arms or furniture, shall have the strappado three times.
- (2) He that shall not appear upon the sounding of the alarm, shall have a certain of bastinados.
- (3) He that shall sleep upon his guard, shall have the strappado.
- (4) Those that shall steal, be it never so small a thing, shall be shot to death with harquebus.
- (5) Those that shall fly, or run away, shall be hanged.
- (6) Those that shall swear, shall be hanged in a basket under a gibbet, by the space of 24 hours, without meat or drink.
- (7) Those that shall either fight or draw their weapons amongst themselves, shall pass the pikes till they shall be dead.
- (8) Those that shall whisper one to another shall have the bastinado through the squadron.
- (9) Those that shall be found a drinking after nine of the clock, or keep light, shall be committed to prison, and have either the strappado, or else hanged in a basket, as is said before.
- (10) He that shall go to his wife, and not have his arms about him, shall have the strappado.
- (11) Those that break open a door shut, shall be taken and receive the punishment ordained in such a case.

- (12) He that is careless of his guard shall have the strappado.
- (13) He that shall be found to bring with him into the Castle any letters without making it known, shall have the strappado.
- (14) He that shall secretly receive any present or bribe shall be punished, and removed from his office.

He that shall play at cards, or such like, shall be hanged in a basket, as above, the space of 24 hours.

* * * * *

Nō woman can come to the Castle after their husbands, but well they may speak unto them through the payles (pailings), or throw them victuals or give them apparel, and such like.

The women must remain altogether in a certain safe place appointed for them, and there tarry till their husbands come for them.

In conclusion, it is interesting to see one example of the many improvised "Army Acts" which were hastily promulgated by those noblemen and others who found themselves in command of bodies of troops at the outset of the Civil War in England. This particular code—it is hardly more than a proclamation—is very short and to the point, and was issued at Coventry in 1643 by the Earl of Denbigh. It was still amongst the family papers of the then Lord Denbigh in 1874, when the Historical Manuscripts Commission printed it in its fourth report.*

The method by which it was made known to the troops is remarkable; for a clergyman was directed to read it before sermon on the day it was formulated—possibly one of the earliest recorded church parades.

A Declaration or Protestation of Basil Earl of Denbigh.....

A List of Orders and Directions from Lord Denbigh to his officers and soldiers appointed to be read after the taking of the Covenant:—

1. That they "Refraine sweareing, excessive drunkenise, and doe noe thing that which is offensive to God, for now they are ymploy'd in a service that tends to God's glory. Now they are carreinge on a worke of reformation".

* Appendix, p. 263.

2. That they be civil and orderly in their quarters, observe seasonable hours, and demean themselves without offence in these parts.
3. That "for their carraidge in generall towards ye whole (*a blank here*), and that they be of good demeanour and inoffenceive, and if they shall otherwise behave themselves they shall both scandalise the cause for which they are ready to laie downe their lives and much dishonor his Lordship whose souldiers they are in this ymploym't, and if his Lordship shall heare of any of these abusive carriadges he will call them to a stricte accompt and severely punish the offenders. His Lordship desires all people in generall within the whole citty to give informacion to him against any that shall thus offend God and his Lordship's commands."

(This document is addressed, "To the Mynister of Bablack Church whome I desire to publish this this afternoone before sermon.")

The spelling of documents quoted in this article has in most cases been modernised.

MILITARY NOTES.

ARABIA.

South-West Arabia.

It is reported that Ibn Saud's mission left Sanaa for Jeddah on 22nd July having failed to persuade the Imam to evacuate his encroachments in the territory of the Idrisi of Asir. As a corollary to this, Ibn Saud is now stated to have dispatched a considerable force to Abha with the object of ejecting the Imam's troops by force from the territory in question.

Treaty of Jeddah.

The text of the Treaty of Jeddah, signed between Great Britain and the Kingdom of Hedjaz and Nejd on 20th May and ratified on 17th September, 1927, has now been published in the press.

By this treaty Ibn Saud's complete independence is acknowledged, the existing friendly relations between the contracting parties is formally recognized, and, except for a reservation on the part of Ibn Saud with regard to the Hedjaz-Transjordan frontier, all outstanding questions have been satisfactorily settled.

AUSTRIA.

Disorders in Vienna, July, 1927.

On 30th January, 1927, a shooting affray took place at the small village of Schattendorf, in the Burgenland, between members of the "Frontkämpfereverein" (the Nationalist Association) and the "Republikanischer Schutzbund" (the Socialist Party Association), in which two of the latter were killed. Three members of the "Frontkämpfer" were arrested and tried before an ordinary jury, which included some socialists. They were, however, acquitted on the grounds that it was impossible to establish on which side lay the responsibility for starting the firing, and that, the evidence being only circumstantial, they may have been acting in self-defence.

The trial, which lasted nine days, aroused enormous popular interest, and when the verdict was given out on Friday, 15th July, socialist demonstrations were held in protest. The crowds, which soon got out of hand, attempted to storm the University, and, failing to do this, marched on the House of Parliament, the approaches to which they found barred by the police. They then turned their attention to the Palais de Justice which was guarded only by 17 police armed with swords. This was set on fire, as was also the offices of the "Reichspost," and a police station. The police, who had been issued with rifles, were forced to fire on the mob, some of whom were armed. The leaders of the worker's organization had meanwhile declared a general strike.

The Socialist Burgermeister of Vienna, Dr. Seitz, refused to call out the military, although application for military assistance was made to him by the police, who felt that they could not cope with the situation. Instead, he, accompanied by the socialist leaders, Herr Bauer and Herr Gloekel, proceeded to the scene in order to pacify the crowd, but without success. They then armed and called out the members of the Vienna Republikänischer-Schutzbund in order to assist the police.

In the meantime the Chancellor, Dr. Seipel, had decided to call out the troops. It appears that the forces in Vienna proved untrustworthy, but the troops in Innsbruck, Gratz and other provincial towns remained loyal to the Government, and prepared to march on Vienna.

Sporadic fighting continued throughout the Friday and Saturday, and the casualties amounted to about 100 killed, including 4 police, and several hundred wounded. Order was restored by the night of 16th July and the Trades Unions then called off the general strike. They were assisted in coming to this decision by the action of the patriotic societies in the provinces, who in many cases made the strikers return to work by force.

It would appear that the disorders were in no way premeditated, and the reports to the effect that they were engineered by communists were incorrect, though once fighting actually started communist agents attempted to exploit the situation.

Discipline in the Austrian Army.

The difficulties under which officials have to work, under socialist conditions, is illustrated by the following article which appeared in the "Neues Wiener Tagblatt" of 11th July, 1927 :—

Platoon Commander and Lance-Corporal.

On the 30th September, 1926, Platoon Commander Josef Lappat, of No. 4 Company Infantry Regiment No. 5, gave his platoon an order to draw bread rations, when a member of the Soldiers' Council, Lance-Corporal Josef Krammer, who belongs to another platoon, entered the room.

On hearing that the order to draw bread rations had been given, the lance-corporal told the platoon commander that the troops were free from all duties after 3 p.m., and could, therefore, not be ordered to draw rations. The platoon commander resented the lance-corporal's interference and ordered him to leave the room, stating that he had no right to be present. This the corporal refused to do, stating that he was a member of the Soldiers' Council, whereupon the platoon commander placed him under open arrest. The lance-corporal refused to appear at the orderly room the next day, stating that he had merely discharged his duties.

Krammer was then charged with insubordination and brought before the District Court. The accused, defended by Dr. Oswald Richter, stated in court that he had merely discharged his duties and had behaved without any bad intentions. Platoon Commander Lappat, who appeared as witness, stated that Krammer did not represent this platoon on the Soldiers' Council and therefore had no right to intervene, and should have obeyed orders given by a superior rank. Counsel for the defence referred to a decision of the High Court which stipulated that members of Soldiers' Councils could not be punished for deeds carried out whilst discharging their duty.

Krammer was acquitted, the judge stating that although his behaviour was to be deprecated from a military point of view, it was nevertheless possible to credit the accused with having acted in good faith, and that his interference as a member of the Soldiers' Council was justified. The Public Prosecutor gave notice of appeal.

BELGIUM.

NOTES ON MILITARY REVIEWS.

"Bulletin Belge des Sciences Militaires."

Published by Imprimerie Topographique de l'I. O. M., Brussels.

Price, 3 francs.

September, 1927.

1. *The Operations of the Belgian Army, 1914-1918. (Continued.)*
Battle of the Yser—operations of 22nd October, 1914, in front of Nieuport.

The narrative starts with a description of the Belgian situation round Nieuport and the effective measures taken by the Belgians to flood the country in the neighbourhood of Le Groote Noord Nieuland Polder, which had been carried out the previous day. The inundations were now reported to be complete between Nieuport and St. Georges (*see map on page 214*).

The crossing of the Yser effected by the Germans on 22nd October, and the complete loss of the river as an obstacle by the Belgians at the end of the day, between Schoorbakke and Tervæte (*vide same map*), is described on pages 198-199; also the ineffective operations of the 1st and 4th Belgian Divisions to counter-attack the Germans, whose crossing of the river had been effected between the flanks of these two Belgian divisions. (Pages 199-203).

The operations of the Belgian Army in the neighbourhood of Dixmude are next described. It had been decided by General Foch on 21st October, that the southern limit of the Belgian Army should be at Saint Jacques Capelle, but by 22nd October the French troops ordered to take over the line south of the latter place had not arrived. The Belgians therefore on 22nd October were holding the Yser as far south as Fort de Knoeke, south of Dixmude. The French troops concerned were under the command of General de Mitry, commanding the Cavalry Corps.

The narrative ends with a description of the dispositions of the French, British and Belgian armies on 22nd October, together with the decisions and operations of the Belgian Higher Command for 22nd and 23rd October.

2. *The Tactical Employment of Transport in a War of Movement.*

By Major Derousseaux. Of interest.

This rather lengthy article deals with the subject of transport columns, especially supply and ammunition columns, on active service ; with a view to instructing troops of all arms, as to the method by which the supplies of all categories reach the front line, and also how evacuations of every description, sick and wounded, salvage of war material, &c., are brought back to their destinations in the back areas.

There is nothing new in this article ; it is merely an account of the system of Belgian army supply and evacuation by road transport, which resembles very closely the French system during the Great War.

In this article the author gives as his estimate of the number of vehicles comprising the "Corps de Transport" of an army corps of 3 infantry divisions on active service :—

825 horse vehicles—occupying 11 kilometres of road space.

1,425 motor vehicles—occupying 38 kilometres of road space.

A table showing the distribution of the various classes of vehicles in an infantry division and in an army corps is given opposite page 247.

Several tactical problems are discussed in the course of the chapter, showing how closely connected are the movement and the disposition of transport with the successful attainment of the operations in question, and how indispensable it is that the "Corps de Transport" commander should be fully cognizant of the tactical conception of the operations, in order that his transport units may conform towards the ultimate conclusion of the operation.

3. *Methods of Directing Artillery Fire by the System of Biaxial Observation.* By Lieut. Duren after the work of Lieut.-Colonel Thomas.

This is a highly scientific and technical study.

4. *The Organization and Working of the Medical Services in War.* (Continued). By Major Leman. Of interest to the R. A. M. C.

This work is divided into two parts. Part I deals with the Japanese Medical Service during the Russo-Japanese War in 1904

and gives an interesting account of the fighting and medical organization of a Japanese division during the operations at Mukden, illustrated by sketch maps.

In Part II the author discusses the methods adopted in Belgium, France, Great Britain and Germany a few years before the outbreak of the Great War.

1. *Operations of the Belgian Army, 1914-1918.* (Continued.)

The Battle of the Yser—Operations of the 21st October, 1914, from the sea coast to Dixmude.

In front of Nieuport the Commandant of the Belgian 2nd Division extended his bridge head which he had maintained on the right bank of the Yser. The Belgian aviation supplied information showing that St. Pierre-Cappelle, Zevécote and Leke were occupied by the enemy.

Next follows a description of the inundation of the sector east of Nieuport under the orders of the commander of the 2nd Division (pages 99-100). On the afternoon of the 21st, the enemy made an effort to cross the Yser, which was repulsed.

Operations in front of Dixmude. Page 101.

The attempt on the part of the enemy to cross the Yser at Dixmude was repulsed by Admiral Ronarch commanding the Franco-Belgian forces.

The operations south of Dixmude are next described (page 103) in which the Belgian Army was holding the line of the Yser between the right of the French Fusiliers-Marins and Fort Knocke.

The co-operation of the British Army during this battle of the Yser is described on page 105, with footnote giving the text of a telegram sent by Marshal French to Lord Kitchener, giving the former's appreciation of the situation, and a sketch map on page 104 shows the theatre of operations.

The decisions of the Belgian High Command in consultation with General Foch are discussed on pages 105-106, and the operation orders issued by the Belgian High Command at Furnes for operations on the 22nd October are set out on pages 107-110.

2. *The Principle of the Battle.* By Major Jobé. (Continued.)

Part XII. The Allied Counter-Offensive.

An article of interest on the Allied counter-offensive from the 18th July, 1918, to the armistice.

The writer discusses in some detail the various phases of the conclusion of operations in the Great War in France, and deals with the following actions:—

- (a) The Allied counter-offensive, 18th July to 4th August, pages 111-112.
 - (b) The Battle of Picardie, page 113.
 - (c) The Battle of Noyon—Bapaume, page 114.
 - (d) The Allied general offensive, 26th September—12th October, pages 116-118.
 - (e) The general offensive from the sea to the Meuse, 13th to 20th October, pages 118-121.
 - (f) The lessons to be learned from the campaign of 1918, pages 121-128.
 - (g) Conclusions.
3. *The Immediate and Efficient Support of an Advance Guard by observed Artillery Fire from the Main Body.* By Captain Commandant Mattague. (Of interest to artillery officers, pages 131-144.)

A highly technical article on artillery as the outcome of a tactical exercise carried out by the Belgian 8th Artillery Regiment in the Occupied Territory.

The article is illustrated by various sketches and artillery time tables showing the time taken between the calling for artillery support and the opening of fire on the target.

4. *The Groupe de Combat.* By Captain Daubechies. (Of interest.)

This work discusses the tactical employment of the *groupe de combat* in the Belgian infantry. In each company there are 3 platoons, each of which is divided into 4 *groupes de combats*, each of 2 teams (*équipes*). In a *groupe* there is a serjeant *chef de groupe*; 1 *équipe* of *fusils mitrailleurs* (automatic rifle) comprising 1 *chef d'équipe*, 1 firer, 4 ammunition carriers; and 1 *équipe* of *fusiliers grenadiers* comprising 1 *chef d'équipe*, 5 grenadiers, and 1 man carrying the special attachment for firing the Viven Bessières rifle grenade, also 1 V. B. ammunition carrier.

The writer criticises the recent amendments in the Belgian Infantry Regulations on the system of training the *groupes de combat* which is now under trial.

The chapter is divided into the writer's views on the tactical handling of the *groupes*—

- (a) When reinforced by other groupes.
- (b) When acting alone.
- (c) The writer's conclusions, comparisons being drawn from the experiences of the French and German infantry.

In the opinion of the writer, the platoon should in modern warfare be organized as follows :—

- (a) The rifle grenadiers (V. B.) should be withdrawn from the hand grenadiers and grouped together in one unit.
- (b) All hand grenadiers should be grouped into one unit and form the element of movement.
- (c) All the 4 *équipes* of automatic riflemen should be grouped into one unit and form the element of fire.

5. *The Organization and Work of the Military Medical Service.*
By Major Leman, Medical Service. (Continued).

This is a historical sketch of the working of the Medical Services in wars of the past.

The writer deals with the following campaigns purely from the point of view of army medical organization, the treatment and evacuation of the wounded :—

- (a) The Napoleonic period.
 - (b) Prussian-Austrian 1866 Campaign.
 - (c) The French Army in the 1870-1871 Campaign.
 - (d) The period between 1870 up to the Russo-Japanese War.
6. *The Moral Education of the Soldier in Practical Work.* By Captain Commandant Danneels. (Of no interest to the British Army.)

The writer explains his views as to best lines on which the conscript shall be educated on the theoretical side of his military duties apart from his practical work on the parade ground. He lays down the subjects on which he considers such theoretical training should be given, and in this particular chapter confines himself to theoretical teaching suitable to outpost instruction, beginning with the duties of sentries, illustrated whenever possible by examples from the Great War.

CHINA.

THE SITUATION. (See map facing page 162).

1. Civil War.

The month of June closed with the Southern armies still on the line of the Lunghai railway, which they had captured about the middle of June. There was then a lull in the fighting which lasted up to the end of that month. During the month of July the lull continued and there has been no serious fighting in any part of China.

Various reasons were given last month to account for this lull. All these reasons concerned Chiang Kai-Shek's difficulties, one of them being the shortage of rolling stock on the Pukow-Tientsin railway and the consequent supply difficulties. In this connection the following figures are of interest as showing the comparative rates of progress along the same railway during the 1925 and 1927 advances :—

Stage of attack.	Sun's advance, 1925.	Kuominchun advance, 1927.
Attack began at Pukow ..	29.10.25	15.5.27
„ reached Mingkwang ..	3.11.25	25.5.27
„ „ Kuchen ..	5.11.25	..
„ „ Hsuchow ..	9.11.25	3.6.27
Total time, Pukow to Hsuchow ..	11 days	19 days
The distance is 250 miles, so that the rate of advance was ..	23 miles a day	13 miles a day

In 1927 the railway was almost denuded of rolling stock, while the retreating Northern armies left practically no local supplies behind them.

In the early part of July a revolt broke out among the Northern troops in Shantung. One of Sun Chuan Fang's generals, stationed on the Tsingtao—Tsinanfu railway, about 30 miles west of Tsingtao, transferred his allegiance to the Southerners, and threatened Tsingtao. Chiang-Kai-Shek's attempt to send a force into Shantung to join hands with the rebels failed, and the revolt was successfully suppressed without any serious fighting. The revolted general appears

to have re-transferred his allegiance to Sun. Such changes of allegiance are frequent and are one of the phenomena observed throughout all Chinese civil wars. They show that loyalty to a superior is not a part of the average Chinese commander's character. A sudden breach of faith appears to be part of the normal war routine in China, and is not confined to any one party.

Although no fighting has occurred, there has been some redistribution of troops during the month.

In Shantung, Sun Chuan Fang after dealing with the revolt near Tsingtao moved the bulk of his troops to Tsinanfu and to the south along the Pukow—Tientsin railway, leaving a detachment holding Tsingtao. During the last week of July Sun commenced a movement southwards along the railway and Grand Canal.

Chang Tsung Chang remains along the Pukow—Tientsin railway, north of the Yellow River. Further west, Chang Tso-Lin has withdrawn his detachment from the north bank of the Yellow River at Chengchow and has concentrated the bulk of his forces round Paotingfu on the Peking—Hankow railway.

Following this retirement, Yen Hsi-Shan, the Governor of Shansi, crossed the Shansi frontier into Southern Chihli and is now occupying the Peking—Hankow railway south of Chengtingfu. He is thus between Chang Tso-Lin and Feng Yu-Hsiang.

The latter, who in June was reported to be in alliance with Chiang Kai-Shek, has made no active movement against the North. Following the withdrawal of Chang's detachment from the Yellow River, Feng crossed to the north bank of this river, but has made no further advance to the north. He has extended his influence somewhat to the east, along the Lunghai railway.

As regards Chiang Kai-Shek, he was able to maintain a small force on the Lunghai railway up to the 25th of July, but was forced to withdraw the bulk of his troops south to the Yangtze before that date.

Sun Chuan Fang thereupon took advantage of Chiang's weakened hold on the Lunghai railway to make an advance, and entered Hsuehow, the junction of the Lunghai and Tientsin—Pukow railways, on 25th July. During this action he captured three southern armoured trains. Sun's advance to the south is continuing at the end of the month.

There have been persistent rumours of an armistice between Chang-Tso-Lin and Chiang Kai-Shek, which, in fact, appears to have been in force up to the time of Sun's latest advance to the south. It is also known that representatives of Chiang are now in Peking negotiating for a definite peace agreement between them. Up to the end of the month no agreement had been reached, nor is there any good prospect of it at present.

Both Feng and Yen appear to be watching these negotiations before taking definite action against either side. Neither of them is strong enough alone to attack Chang Tso-Lin. Chiang is fully occupied on the Yangtze. Mutual jealousies appear at present to prevent a successful triple Southern alliance against the North. Chang Tso-Lin is, therefore, for the time being safe in Peking.

The Northern forces in Shantung and Chihli have again been hampered during the month by the bands of armed peasants ("Red Spears," &c.) which roam about the countryside.

2. *Military aspect of the Nationalist split.*

At the end of June, the extremist government at Hankow found themselves hemmed in on all sides, with their power seriously crippled.

In the middle of July, the Russian military "adviser" Galen persuaded the Hankow Government that a desperate attempt to break out of this ring of hostile forces must be made. An expedition consisting of a portion of the army, under the guidance (and possibly the command) of Galen, and accompanied by the bulk of the Chinese and Russian extremists, was despatched downstream to Kiukiang. It will be remembered that at the end of June, the Nationalist commander at Kiukiang had been bought over by the extremists. The immediate objective of this expedition is to oust Chiang Kai-Shek from Nanking, with the ultimate object of seizing the rich prize of Shanghai.

As soon as this threat to his bases (Nanking and Shanghai) became clear to Chiang, he withdrew the bulk of his forces from Shantung to the Yangtze. He then despatched from Nanking a considerable force up the Yangtze as far as Anking to meet the forces approaching from Hankow. Up to the end of the month, there had been no clash between these armies.

Meanwhile, at Hankow the departure of the extremists gave an opportunity to the more moderate elements to seize control. This they appear to have done, after having organized a general rounding up of all Communists and labour extremists left in the city. A *rapprochement* between the moderates at Hankow and the Nanking régime is thus once again a possibility, except that the combine would be on a "moderate" basis.

The rapidity with which Chiang concentrated a force on the Yangtze seems to have upset the calculations of the "extremist" expedition from Hankow, which is faced both downstream at Anking

and upstream at Hankow by hostile or potentially hostile forces. Chiang is believed to be both politically and militarily strong enough to resist them on the Yangtze. They have, therefore, moved a portion of their forces south from Kiukiang to Nanchang. They appear to have given up the idea of attacking Nanking, but are still believed to be contemplating an attack on Shanghai from the south-west via Hangchow.

Borodin, the chief Russian "adviser" to Hankow, has deserted the expedition and has gone to join Feng at Chengchow, *en route* for Russia.

3. *The threat to foreign interests in North China.*

The check in the Nationalist advance towards Peking and Tientsin and the withdrawal of Chiang's troops towards the Yangtze, relieved the immediate danger to foreign interests which would be involved by the occupation of this area by Nationalist forces. The danger from the bands of armed partisans ("Red Spears," &c.) still exists. There are a number of these bands in Shantung and Chihli similar to the Boxers of 1900, who are anti-Northern, and who, under the influence of propaganda, may easily become anti-foreign.

During the month the following steps were taken by the Governments concerned :—

France.

The mixed battalion from France, reported in the June Summary as on the way, arrived at Tientsin.

An additional battalion was sent from Shanghai to Tientsin.

Japan.

Owing to the threat of fighting in Shantung consequent on the revolt of certain Northern troops, the Japanese force which reached Tsingtao during June moved inland to Tsinanfu, to protect the railway and other Japanese interests in Tsinanfu and elsewhere in the Shantung province. A force of 300 Japanese sailors from Shanghai was sent to Tsingtao to replace them. The sailors in turn were relieved by a force of 1,500 from Dairen (Manchuria). These forces remain in Shantung, where the local situation at present is quiet.

1. *Civil War.*

The month of July closed with the Northern Forces of Sun Chuan Fang following up Chiang Kai-Shek's armies which were retreating from the line of the Lunghai railway.

During August the advance of the Northerners towards the Yangtse continued, Chang Tsung Chang's troops moving along the Tientsin—Pukow railway and those of Sun Chuan Fang along the Grand Canal and by the route along the coast of Kiangsu province. Chiang Kai-Shek meanwhile had withdrawn the bulk of his forces back to the Yangtse; thence they had been diverted, some upstream to Anking to oppose the expedition from Hankow of "extremists" under General Tang Sheng-Chi, and some *via* Shanghai to Hangchow and the western border of the province of Chekiang, to oppose a possible advance of "extremist" troops on Shanghai from the direction of Nanchang.

By the 16th August Chiang Kai-Shek's forces had completely withdrawn south of the Yangtse, and on the 17th August, Pukow was occupied by Northern Troops. At the same time Sun Chuan Fang had reached Yangchow, which is on the Grand Canal about 12 miles north of Chinkiang, where the Canal joins the Yangtse. By this time, also, an advance party of Northerners were approaching Tungchow by the coast route, Tungchow being on the left bank of the Yangtse, about 60 miles north-west of Shanghai. There already appeared to be indications that the Southerners were preparing to evacuate Nanking and the right bank of the Yangtse.

Chiang Kai-Shek's difficulties had been increasing on account of the Northern advance, of the simultaneous advance from Hankow, of financial difficulties and of the desertion of some of his subordinates. These were not his only difficulties, for Canton was paying no heed to his Government at Nanking and local governments as near as that at Hangchow were showing an increasing tendency to follow a radical policy of their own. The more moderate elements at Hankow were, however, momentarily, obtaining control—the Russian advisers having departed—and the possibility of a *rapprochement* between Hankow and Nanking on an anti-communist basis seemed to be obstructed only by the presence of Chiang Kai-Shek. So there were many reasons why Chiang Kai-Shek left Shanghai on the 14th August and issued a proclamation "to the Chinese people" that he was retiring into private life. His place as head of the Nanking Government was not filled, whilst his post as Generalissimo was taken over by a Military Council. The Commander of the 7th Nationalist Army at Anking, previously on the side of Chiang Kai-Shek, thereupon transferred his allegiance to the Hankow "Nationalists."

At the close of August, raids by Northerners across the Yangtse had already taken place both in the vicinity of Nanking and Chinkiang, while further east it had been definitely reported that Tungchow was in their hands. Lack of shipping to cross the Yangtse impeded the Northerners in their efforts to continue their pursuit of the retreating Southerners at a time when it appeared, by the removal of military stores, that the Southerners were preparing to evacuate Nanking and the right bank of the Yangtse. On the 31st August the situation at Nanking was obscure, but the Northerners appeared definitely to have established themselves east of the city and to have cut the railway communications between Nanking and Shanghai.

On the Nationalist side it had appeared possible that the Hankow armies might come into conflict with the Nanking armies while the latter continued to resist the Northerners, or that the Hankow and Nanking armies might combine against the North. By this time combination rather than conflict seemed the more likely and no fighting was reported between the two "Nationalist" factions. In fact, the arrival of the Hankow expeditionary force in the vicinity of Nanking probably served as a reinforcement to the Nanking troops. Moreover the reported despatch of a force from Anking to Pengpu to cut the Northerners line of communication along the Tientsin-Pukow Railway tended to confirm the idea that Hankow and Nanking were co-operating. It was also evident that the Nanking Generals were divided; one of them—Ho Yin Chin—was believed likely to invite Sun Chuan Fang's co-operation and, in that way, to cede Shanghai to the Northerners. Nevertheless, preparations were made by the Nanking Generals both to repel the raids of the Northerners across the Yangtse, and if that failed, to defend Shanghai on a line running between Soochow and Liuho; the latter place is about 25 miles north-west of Shanghai.

In the north, Chang Tso-Lin's forces remained concentrated in the Paoing area, about a hundred miles south-west of Peking, on the Peking-Hankow Railway. Chang Tso-Lin still held the position of Generalissimo of the North and the successful recovery of the Northern forces undoubtedly enhanced his prestige.

Chang Tsung-Chang, the other principal figure in the North, has been on the decline and his reported absence from Shantung must

please the people of the Province who hate him for his brutality and ruthless extortion.

South of the area in which Chang Tso-Lin's troops were concentrated south of Peking, Yen Hsi-shan held a sector of the Peking-Hankow Railway until the middle of August, when he withdrew his detachment back into his own province of Shansi. An agreement was then reported between Chang Tso-Lin and Yen Hsi-shan whereby the latter ceased to show all outward signs of recognizing the Nationalist party. It is evident Yen Hsi-shan strives to maintain neutrality, from which he has earned the title of the "model" Tupan, but when a crisis arises he throws in his lot, probably under pressure, with the winning side, whichever it may be.

Further south on the Peking-Hankow Railway was Feng Yu-hsiang. Recently he had been ostensibly allied to Chiang Kai-Shek, and had made a half-hearted attempt to move eastward along the Lunghai Railway to cut the lines of communication at Suchow of the Northerners attacking Chiang. The attempt was easily frustrated. It was also thought in Hankow that he would make some attempt to capture that city in the absence of the Hankow forces downstream, but there was no confirmation of the rumour that he had made a move, nor did he appear to make any further attempt to move against Chang-Tso-Lin. Feng seems to have been waiting to see the outcome of the quarrel between Nanking and Hankow. Meanwhile, preparations had been made at Hankow to defend the city against Feng.

(2) *The Nationalist split.*

The most important event of the month in "Nationalist" China was the resignation and flight of Chiang Kai-Shek from his position as head of the Nanking Government. This illustrated that he was little different from other Chinese war lords who seek their personal aggrandisement before party, province or nation. As described above, his departure took place on 14th August as the result of an accumulation of factors hostile to him. Since it has been asserted—partly on account of his agreement with Feng Yu-hsiang—that Chiang Kai-Shek was an obstacle to a *rapprochement* between Hankow and Nanking it ought to follow that his departure would facilitate such a *rapprochement*. Events seemed to show that this was true, to a certain extent, and momentarily at any rate, for not only did the forces of the two factions appear to be co-operating

but at the end of the month the majority of the heads of the Hankow Government had already left Hankow, with the object of establishing one Nationalist Government at Nanking. It was possible, however, that Nanking might fall to the Northerners before these Hankow representatives could arrive, and that is why, presumably, the remaining members of the Hankow Government decided to stay behind and await the result of events at Nanking.

The common cause which seemed at first to strengthen the link between Hankow and Nanking was their outward display of opposition to Communism, which actually may not mean very much. The split in the Nationalists then showed itself mainly between the Hankow-Nanking group on the one hand and Feng Yu-hsiang, together with other stray extremists on the other. A definite line, however, is very difficult to draw at the moment, when so many changes are taking place among the "Nationalist" leaders.

(3) *Situation at various centres.*

Shanghai.

Shanghai was quiet during the early part of the month. Later, however, there was a slight revival of the activities of the Labour Unions and Communists. Strikes also occurred in Japanese mills, but without any serious disturbances.

Nanking.

As Nanking was becoming the centre of conflict in the civil war, Admiral Tyrwhitt landed a detachment of marines, 146 strong, on 21st August, in order to protect the property of the International Export Company at Nanking, in which there are British interests to the value of £2,000,000.

Following the capture of Pukow by the Northerners a bombardment of Nanking took place and British subjects were again evacuated by H. M. ships.

Yunnan.

The result of the indecisive fighting in Yunnan during July was the defeat and flight of Ho Jo Yi who had controlled the province since May. General Lung Yun established himself as head of the Government with the support of all moderate elements. No important British interests were involved.

(4) *The threat to foreign interests in North China.*

The retreat of the "Nationalists" from their unsuccessful advance on Peking relieved the danger of "extremist" violence against foreign interests in North China.

The Japanese decided at the end of August to withdraw their garrison—about 3,800 strong—from Shantung.

(5) *Reduction of British troops in the Far East.*

His Majesty's Government decided on 25th August to reduce the British garrisons in the Far East by five infantry battalions and one field artillery brigade, in addition to the Indian infantry brigade already partly withdrawn. One company of infantry was to be retained at Wei-Hai-Wei throughout the winter, the battalion now there being removed in October. The Government considered that the force remaining will be sufficient to carry out their policy of protecting British lives, including the holding of the perimeter at Shanghai, as well as the maintenance of order within the settlement. One company at Wei-Hai-Wei has been considered sufficient in present circumstances.

THE SITUATION.

1. *Civil War.*

August closed with an obscure situation at Nanking. Northern forces, having pursued Chiang Kai-Shek's troops back to the Yangtse, had managed to cross the river east of Nanking in small numbers, and had succeeded in cutting the Shanghai-Nanking Railway. Early in September it became evident that the Northern effort was spent—lack of shipping prevented any large Northern concentration on the right bank of the Yangtse, and by 7th September it was obvious that Sun Chuan Fang's attempt to seize Shanghai had failed. His troops began re-crossing the Yangtse, and by 12th September Pukow was re-occupied by the Nationalists.

During the month there has been no further fighting. The Northerners withdrew slowly northwards along the Grand Canal and the Pukow-Tientsin Railway, and remained at the end of the month about 50 miles north of the Yangtse. The Southerners made no attempt to hasten the withdrawal.

During the month the various leaders have been negotiating amongst themselves. So far, no very definite results have been achieved. It seems fairly clear that Feng Yu-Hsiang has, up to the present, been the chief loser, nearly all the other contending leaders being hostile to him. It is probable that the outcome of the various negotiations will be the formation of a series of provincial regional governments.

Although no fighting has taken place, there have been certain troop movements. An important movement was that of Chang Fa-Kwei. This general was originally in command of the Hankow expedition against Nanking. After arriving at Kiukiang, Chang Fa-Kwei broke away from the rest of the expedition and moved southwards with some of the forces. His destination was not known till the end of the month when he appeared in Canton, with the object of ousting Li Chai-Sum, the Governor, and seizing control himself.

On the same day that Chang Fa-Kwei arrived in Canton, two Communist generals, Ho Lung and Yeh Ting, who were also originally part of the Hankow expedition, arrived in Swatow. These two generals are extreme Communists who mutinied from the Hankow expedition when it was at Kiukiang and marched away with their troops. The local authorities at Swatow fled, and the city was partially looted by these Communist troops and the local mob. The Japanese put ashore a naval landing party of 60 to protect their consulate, though foreign interests were not actually threatened. A small British naval landing party was also put ashore, but was withdrawn the same day.

Following the capture of Canton and Swatow by Communist troops and with the concurrence of the Russian "advisers," a fresh centre of Soviet influence appears to have been established in south-east Kwantung.

On the Upper Yangtse, Wu Pei-Fu and Yangsen have remained quiet during September, but at the end of the month there were indications that they were again likely to play a more active part on the Chinese stage in the near future.

2. *The Nationalist split.*

Following the flight of Chiang Kai-Shek in August, an attempt was made during September to re-unite the Nanking and Hankow nationalists into a homogeneous party. A party conference was summoned to meet at Nanking on 15th September. Invitations were accepted by the Hankow leaders, but at the last moment, Tang Sheng Chih, the Hankow military commander, and others refused to attend. The conference was held nevertheless, and certain decisions were reached as to the constitution of the new Nationalist Government to be set up in Nanking. In the absence of the Hankow leaders, the conference was really a failure. This became obvious

by the end of the month when Tang Sheng Chih and his friends set up a new military government in Hankow, independent of Nanking. How long Tang will last is uncertain. At the end of the month he was reported to have gone to Hunan, owing to a threat from Yangsen and Wu-Pei-Fu to turn him out of Hankow.

The newly constituted Nanking Government includes a military council of 60, with 16 permanent "chairmen." An invitation was extended to Chiang Kai-Shek to become one of the latter, but it is not yet known whether he will accept. Chiang has left Shanghai, and is believed to have reached Japan.

3. *Situation at various centres.*

Shanghai.

During August, a British aeroplane had to make a forced landing on the Chinese racecourse at Shanghai. A party sent out by the Royal Air Force to bring in the machine successfully dismantled it and brought in all but the wings. The local Chinese commander then stepped in and refused to allow these to be removed. An ultimatum was given to him ordering him to release the wings within a definite time. The order was ignored. General Duncan therefore gave instructions that the Shanghai-Hangchow Railway should be immediately cut. This was accordingly done. It so happened that considerable Chinese troop movements were in progress along this railway at the moment, on account of the threat to the Nanking Government forces both from the Northerners and from the Hankow expedition. All these movements were therefore temporarily held up. The effect of this action was that the wings were handed over intact next day, *after* which the railway line was repaired.

Canton.

During September a threat to start a new anti-British boycott was made in Canton. Permission was given by His Majesty's Government to take immediate naval action against the Chinese picket boats should the boycott develop. The fact that firm action would be taken was made known to the Chinese authorities. The boycott did not materialize.

Tientsin.

Following a threat by the provincial governor of Chihli to seize the salt depots near Tientsin, permission was given for an international party of consular and military officers to visit the depots.

The object of the visit was to consider the possibility of sending an international force to protect the depots, which are important, in that the revenue from the salt trade forms, together with the maritime customs, the chief remaining source whence foreign loan obligations can be met.

The visit of this small international party, however, had so much effect that no attempt has since been made to interfere with the salt depots, although no troops have been used at all.

These three incidents, one in the north, one in the centre, and one in South China, indicate the efficacy of a firm attitude when dealing with the Chinese authorities.

Hankow.

By the end of September a serious situation had arisen at Hankow. It will be remembered that before handing the British concession over to the Chinese in February, 1927, an agreement was come to as to the future management of the Concession. By this agreement a Chinese director was appointed as head of an elected mixed British and Chinese Municipal Council. This arrangement has now proved unworkable. There has been considerable interference by local military authorities, and on 26th September the Chinese director fled on board a British warship for protection. Municipal amenities are practically non-existent, and there has been embezzlement of local funds. The new local political Council has appointed a Chinese successor to the director who fled, but, as this appointment is contrary to our agreement with the Chinese authorities, neither the British nor Chinese members of the Municipal Council wish to recognize the new director.

At the end of the month the situation remained difficult, with the possibility that stronger measures may have to be used in order to reassert the authority of the Municipal Council.

Yunnan.

Considerable fighting took place in and round the city of Yunnan at the end of September. It will be remembered that during July a General Lung Yun attacked and turned out the previous head of the Government of Yunnan and set himself up at the head of a Kuo-mintang Government. The present fighting is an attempt by certain disaffected Chinese elements to turn out Lung Yun, who is regarded as an usurper. By the 30th September the result of the fighting

was still in doubt. The majority of the foreigners in Yunnan City have left for Tonkin. No important British interests are involved.

Hong-Kong.

Early in September a raid was carried out by a British naval landing party against the Bias Bay pirates. This raid was undertaken after a piracy against a British-owned steamer. After due warning had been given to the inhabitants to leave the villages where the loot had been landed were destroyed. There were no casualties on either side.

Manchuria.

During the month there were a number of instances in Manchuria of anti-Japanese outbreaks. Stone-throwing and boycotts were reported from various centres. These were organized on account of certain demands made by Japan with a view to increasing her already large interests in Manchurian railways, mines, &c. Japan protested to Chang Tso-Lin against the agitation, which, on Chang's instructions, died down in the latter half of September. Japan's protest was effectively backed by a threat to use force, a threat she has never hesitated to carry out whenever her interests in Manchuria have been endangered.

Mongolia.

During September reports have been current about the organization of a "White" Russian movement against Mongolia. There is no evidence that the Japanese Government are prepared to assist this expedition in any way, but there is no doubt that both Chang Tso-Lin and the Japanese would be glad to see a check put on the "Red" Russian progress in Mongolia. The leader of the expedition claims to be the legitimate successor to the "Kolchak millions." The latter is a large sum supposed to have been left in the custody of the Hong-Kong and Shanghai Bank after the collapse of the Kolchak anti-Soviet movement. There is as yet no definite information about the progress or prospects of this "White" Russian movement.

4. *The threat of foreign interests in North China.*

In accordance with their decision reached in August, the Japanese evacuated all their troops from Shantung, including Tsingtao, on 9th September.

5. *Reduction of British Troops in the Far East.*

The withdrawal of the 20th Indian Brigade was completed on 3rd September.

The reduction of the Shanghai Defence Force was continued when the 1st Battalion Devonshire Regiment sailed for Malta on 10th September.

EGYPT.

Zaghlul Pasha.

After a brief illness Saad Zaghlul Pasha died at his residence in Cairo on 23rd August.

Mustapha Pasha Nahas.

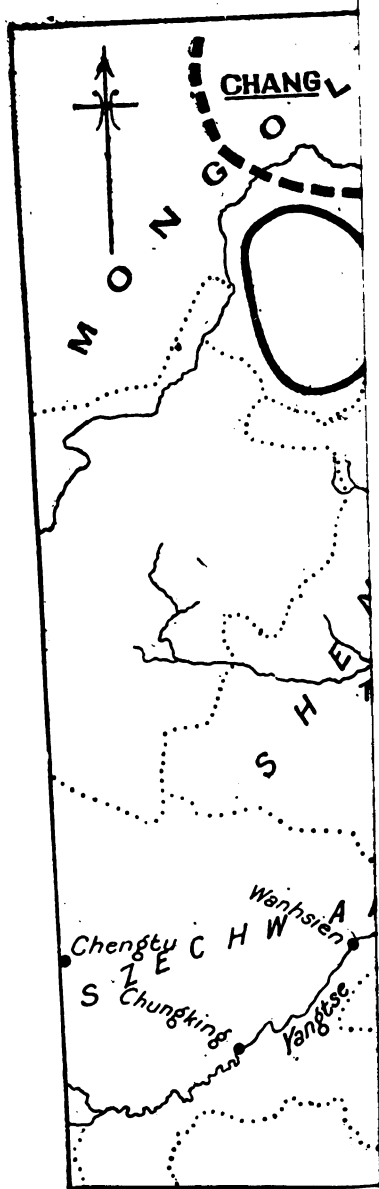
Mustapha Pasha Nahas, formerly a Minister in Zaghlul's Cabinet and until recently Vice-President of the Chamber, has been elected leader of the Wafd and Chairman of the Wafd Parliamentary party in succession to Saad Zaghlul Pasha.

Political Situation.

During the last few months it has been obvious that the question of the administration of the Egyptian Army, which had been the subject of a series of semi-official representations by the High Commissioner, would have to be settled. Towards the end of May matters came to a head with the publication of a report by a Parliamentary War Committee, which recommended, *inter alia*, the abolition of the post of Sirdar, and an increase in the size and armament of the army. Accordingly Lord Lloyd presented an official note, couched in friendly terms, in which it was stated that, in order to ensure adequate control of the army, and to secure its proper participation in the defence of the country, the following points must be insisted on—

- (a) Renewal of present Inspector-General's contract for 3 years, and no decrease in his powers as Sirdar.
- (b) A British officer to be appointed as second-in-command to the Inspector-General.
- (c) The Frontier District and Coastguards to be under British supervision.

At the same time, Lord Lloyd pointed out that so long as the army was reorganized with British assistance, Great Britain would raise no objections. The Egyptian Government originally returned



an evasive and unsatisfactory answer to this note and for some time anti-foreign feeling ran high. In the end, however, being assured that His Majesty's Government had no intention of withdrawing or reducing their demands, the Egyptian Government gave in and acceded to the more important conditions.

FRANCE.

Notes on Military Reviews.

"REVUE MILITAIRE FRANCAISE."

June, 1927.

(Published by Berger-Levrault, 136, Boulevard St. Germain, Paris.

Price 4.50 francs.)

1. *The Movements of an Infantry Division in War—Part VII—*
(3 maps). By Lieut-Colonel Laure and Commandant Jacottet. Of interest.

To illustrate the success of a foreseen and prepared battle.

The 13th D. I. in this operation held the Souain sector in General Gouraud's 4th Army, 14th June—13th July, 1918. The general organisation of the defensive front of the French and U. S. A. troops, especially that of the forward zone and the artillery arrangements are described in detail. A good account of the German attack and the cause of its failure is given.

2. *Manœuvre in the Attack—Part III.* By Colonel Moyrand.
Chiefly narrative, of little interest.

Deals with the second battle of Guise—operations of 15th, 36th and 8th Corps between 17th October and 11th November, 1918, and deductions from the point of view of the Corps Command.

3. *The Fighting Capacity of the Larger Formations—Part I.*
By Colonel Lucas. Of interest.

Deals with frontages in attack and defence, and the time for which a Division can usefully be kept in the front sector without relief. The evolution of ideas regarding frontages is traced from 1870 onwards, up to 1916.

4. *The Catastrophe of Tannenberg—Part II.* By General Camon.
Of interest.

Deals with the battle of Tannenberg, and the faulty dispositions of the Russian Higher Command. The author endeavours to apply

the Napoleonic doctrine to the situation presenting itself to the Russian Commander prior to the battle. This study, which is interesting, he calls the "Manœuvre of the Passage."

5. *A Memorandum on Shanghai.* By Capitaine Girves. Of interest.

A short well-written paper on the settlement of Shanghai, its foreign concessions and administration from a "Frenchman's point of view."

ARMY REORGANIZATION.

(a) *Progress of Legislation.*

The Law for the general organization of the army has passed the Chamber and Senate, and has now been promulgated.

The final clause of the Laws lay down that the period of active military service cannot be reduced (*i.e.*, from 18 months to 1 year) until the preliminary conditions, such as the enlistment of additional long service personnel, &c., have been realised (*vide* Monthly Intelligence Summary, Vol. 10, No. 4 for February, 1927, page 148).

The Laws of Recruiting and of Cadres and Effectives will not be considered by the Chamber until October.

Meanwhile, the French Government have succeeded in passing a short Law, which enables them to carry out, as required, any re-grouping or reduction in strengths, due to the reorganization Laws. Actually reorganization has been proceeding steadily for some considerable time.

(b) *The Draft Budget for 1928.* (Army strengths).

The French draft budget for 1928 has been laid before the Chamber, and, in consequence of the reorganization proposals, there is a considerable reduction in effectives.

The draft budget provides for a heavy increase in military expenditure, namely, 1,048,107,784 francs more than in 1927. This is due mainly to the granting of higher pay and allowances, and to the enlistment of additional long service soldiers and civil employees.

The main provisions are—

- (i) A decrease in the strength of the French Army of 1,047 officers and 50,968 other ranks.

Establishment for 1928 (Metropolitan and Colonial Army) excluding Irregulars and Gendarmerie, 30,185 officers and 590,048 other ranks.

The decrease is effected by retarding the calling up of a proportion of white conscripts ; this measure will assist the subsequent raising of the military age to 21.

(ii) Increases in the following categories :—

9,714 additional long service regular soldiers.

3,000 additional gendarmes.

4,000 additional agents militaires.

3,500 additional civil employees.

(iii) No change in the Rhine Army establishment.

(iv) 54,300,000 francs to be spent on frontier fortifications in France.

(v) 200,000 reservists to be called up in 1928 for 25 days' training.

July, 1927.

1. *The Movements of an Infantry Division in War—Part VIII* —(2 maps). By Lieut.-Colonel Laure and Commandant Jacottet. Of interest.

Continues the experience of the 13th D. I., illustrating the success of repeated attacks on an enemy deprived of strategical liberty of action. The operations discussed are those in the Somme-Py area, against the Hunding-Stellung, and the pursuit towards Mézières, between 25th September and 11th November, 1918.

These attacks were carried out from depth, the earlier ones under very heavy barrage and with heavy artillery and tank support ; in fact typical trench warfare operations in conception. The lessons drawn from the operation as a whole are the value of the offensive, even after initial failure ; the difficulty of maintaining contact between medium and heavy artillery support and the other arms during an advance from position to position, and a subsequent pursuit ; the danger of losing tanks in prepared avenues through defended forest country, and the difficulty of getting out orders in time for troops to act.

2. *Manœuvre in the Attack—Part IV.* By Colonel Moyrand. Of interest.

The operations of the 15th, 36th and 8th Corps at the 2nd Battle of Guise, considered from the point of view of the army corps.

The author discusses the plan of manœuvre, which every corps commander must make, at any rate mentally, regarding initial dispositions, general intentions, and reserves for subsidiary operations

or unforeseen contingencies. He points out that co-ordination is his real duty, *i.e.*, the combination of the action of the divisions in the corps with the corps troops, to a common end. Some useful statistics are given of the allotment of guns and tanks to the army corps for different operations.

3. *The Fighting Capacity of the Larger Formations—Part II.*

By Colonel Lucas. Of interest.

Continues the discussion on frontages and depths of attack in 1917 and 1918, from the previous chapter. The author compares French and German ideas on the subject in trench warfare, and the more open warfare at the end of the war, and sums up post-war ideas on the subject. It is interesting to note how French and German ideas on this subject appear to have evolved on the same lines more or less simultaneously.

4. *The Events in China (2 maps).* By Captain Girves. Of little interest.

A summary of military movements in China since August 1926, giving the French views of the Kuo-min-tang and Communist organization.

5. *Cross-Country Motor Cycling.* By General Camon.

Propaganda for the employment of existing motor cycles on mobilization.

6. *Books of Interest Criticised.*

(a) "Die Kampagne in Sundgau." (Swiss source).

(b) "Allied Military Control in Germany." Paul Roques.

August, 1927.

1. *The Movements of an Infantry Division in War, Part IX.*

By Lieut.-Colonel Laure and Commandant Jacottet. Of interest.

This chapter concludes the series of experiences of the 13th D. I. by a study of the best use of men and material in the future national organization for war, from a realistic as opposed to a theoretical basis. Briefly analysed the writers' doctrine lies in the use of the division as the unit of combat, as opposed to the army corps which is merely an organ of command for such varying number of divisions as strategical concentrations may necessitate. The organization of the division is discussed at length, especially as regards the proportion of armament

to infantry personnel, and summed up much in favour of a division containing all forms of armament, but reduced infantry effectives. Some excellent and interesting comparisons of the results of operations by the Moroccan ("a forte infanterie") and other divisions ("a infanterie reduite") are given. A strong plea is made for the retention of a large proportion of the national army as a general reserve and against certain reactionary tendencies, namely, that the infantry loses most men and must therefore be more numerous than ever: that the three unit division is not manœuvrable: that the infantry of the division was only reduced as a war measure.

This article is well worth perusal.

2. *On the Right of the 5th French Army in August, 1914, Part I (1 sketch map).* By Commandant Padovani. Of interest.

Deals with the influence on the decisions of G. Q. G. and the G. O. C., 5th French Army, of the combats between Givet and Namur on the River Meuse. A very clear account giving many of the orders issued by the 5th Army and showing the state of uncertainty of the French Command as to German intentions east of the Meuse in the Ardennes, and on the Sambre respectively. This lack of information caused the 5th Army to withdraw its right wing from the west bank of the Meuse, at the very moment the defence should have been strengthened.

3. *Notes on a Recent Mission of the Algiers Chamber of Commerce towards the Niger River, Part I (1 sketch map).* By General Meynier. Of interest.

In order to study the maintenance of security in the Sahara, M. Viollette, the Governor-General of Algiers, sent a most successful mission there in 1926 to study technical questions. A hostile raid undertaken by the "Reguibat" of the Western Sahara into the Southern territories also took place. Both these events have produced important information for the future organization of the country.

The mission consisting of some 30 members, with local air escorts, travelled in six-wheeled Citroen and Berliet cars in three convoys from the coast to Bourem on the Niger, some 300 miles from our Nigerian frontier. This article is limited to the military technical results, especially as regards routes, vehicles, aviation lines and communications.

An exposé of the military situation on the Italian and Spanish frontier is given, and an account of the raid in question.

4. *Anti-Aircraft Artillery Abroad* (1 diagram). By Commandant Vauthier. Of interest statistically only.

Discusses the actual situation and tendencies, as gleaned from magazine articles and manuals in Italy, U. S. A. and Great Britain.

Tables of matériel in use are given for the U. S. A., Germany and Italy, and of the organization of Great Britain, Italy and U. S. A.

The article is probably largely American in origin.

5. *William the Conqueror at Hastings*. By Colonel Revol. Of historical interest only.

September, 1927.

1. *Douaumont during the German occupation*. (With map). By General Rouquerol.

This article is of little more than historical interest, but in so much as it is based on the translation of a German document, enables the writer to throw light upon certain points hitherto obscure. Another instance of the danger of allowing written orders concerning future operations to reach the front line troops is shown on page 265, where we learn that the Germans knew days beforehand of the first French counter-attack at Douaumont, a copy of the orders having been taken from a prisoner.

2. *Destruction as a weapon of strategical defence*. By Lieut.-Colonel Baills.

The writer, who is chief instructor at the Engineer School at Versailles, and a most prolific writer on military subjects, reviews at great length the use made by the Germans of the weapon of destruction during the Great War. There is little or nothing new in what he says, but it is of interest, to note that vehicles cannot count on doing more than 5 kms. in 10 hours across a country that has been laid waste by a retreating enemy, whilst the necessary repairs to railways reduce the rate of advance of rail traffic to 1 km. per day. Colonel Baills gives it as his opinion that if the Germans in their retreat across the Marne had blown up all the bridges between Ferté-sous-Jouarre and Chateau Thierry, instead of only those close to Ferté-sous-Jouarre, the IIIrd British Corps would have been held up for a week or 10 days, which might have saved Von Kluck's army from defeat.

3. *On the right of the 5th French Army in August, 1914. Part 2.*
(With map.) By Commandant Padovani.

Amongst other incidents of historical interest, the writer describes the attack on the village of Onhaye by the 51st Reserve Division, led apparently by the army and corps commanders, as well as their own divisional commander, all of whom rode at the head of the troops and charged with the front line.

4. *Notes on a recent mission of the Algiers Chamber of Commerce towards the Niger River. Part 2.* By General Meynier.

This article is of considerable interest and gives a forecast of the nature and organisation of the troops whose duty it will be to police the Trans-Saharan routes. The French authorities have apparently decided that permanent petrol depôts must be established every 250 to 300 kms., and repair shops every 600 to 700 kms. On the air lines primitive landing grounds are to be established every 20 or 30 kms., and permanent landing grounds with repair shops every 200 to 300 kms.

Three hot weather stations are suggested for the troops of the permanent garrison during the summer months, at an average height of 3,000 feet, and many other interesting details are given.

5. *The Serbian victories in 1914. Part I.* (With maps.) By Commandant Desmazes.

In his introduction the writer states with some truth that very little is known about the Serbian campaign in the early part of the war, and as most of his data has been obtained from Austrian or German sources, it may be assumed that the account is both accurate and not over-flattering to the Serbian Army.

There is an interesting note on the late King Peter, father of the present king, and his connection with the French Army.

On page 348, we read that as far back as 1882, a Russian statesman, Count Chouvaloff, wrote apropos of the ceding of Bosnia and Herzegovina to Austria, that it was his profound conviction that a great mistake had been made, and that Russian diplomacy by agreeing to Austria's request, had sown the seeds of a future European war.

FRENCH WEST AFRICA.

A RAID IN MAURETANIA.

The following is an account of an attempted raid on Port Etienne, in Mauretania, and the subsequent operations.

On the 13th June, 1927, a raiding party of 80 rifles left the Spanish territory of Rio de Oro, under the leadership of three well-known chiefs, to attack Port Etienne.

The alarm was, however, given by a friendly chief, who then took refuge in a blockhouse and defended himself vigorously with his small garrison of 4 men and a corporal. Thanks to the courage and vigilance of these Senegalese, and to the prompt measures of defence taken by Captain Bousquet, commanding the garrison of Port Etienne, the attempt was foiled.

The raiding party withdrew to reform on the Franco-Spanish frontier, and after lying up for a while, started out again towards the south, this time avoiding Port Etienne. On the 24th June it was near Mederdia, less than 120 miles from Saint Louis in Senegal, and took 300 camels and a number of prisoners from the small tribes who live under the general protection of a famous holy man, Sheik Saad Bou, the chief of the Fadelia, who have long been allies of the French.

Their object achieved, the raiders laden with their booty made tracks again for their refuge in Rio de Oro, killing three fishermen from the Canary Islands at Cape Timiris on the 29th June. On the 2nd July contact was gained by contingents of the Emir of the Trarzas, who encircled the raiders and killed two of their leaders.

At this moment Captain Bonafos, warned 250 miles away by wireless, arrived on the scene with his camelry detachment of meharistes. Adopting the tactics of the Sahara, he occupied all the main wells in the vicinity, and thereby forced the raiders first to leave their booty to lighten their column, and then to split up into small parties to avoid dying of thirst.

The third leader of the raiders had hoped to hide in the Mount Ibi, about 30 miles from Atar, not far from Azoueiga, where in July 1925 Mohamed Mahmoud had plundered a convoy and murdered the Frenchman in command of it. This time the tables were reversed, and the raider chief was captured.

This closes the episode in which a raiding party was able to cover nearly 600 miles in Mauretania unscathed while plundering and killing most of the way. Such incidents strengthen the French thesis which demands the pacification of the Western Sahara and the right of pursuit into the Spanish territory of Rio de Oro.

GERMANY.

Notes on German Publications.

Schlachten des Weltkrieges. The Campaign in the Argonne Forest. From material supplied by the Reichsarchiv.

This book gives a wealth of detail regarding what is described as the longest campaign in wooded country known in history. It developed into a small war on the initiative of the subordinate commanders owing to the special nature of the ground. The forest was soon destroyed in consequence of the terrific effect of modern weapons, and the conflict gradually assumed the nature of position warfare similar to that on other parts of the front.

In spite of heavy artillery, tanks, aircraft, mortars and gas, it was the human element that counted. Violent offensives were continually undertaken and new methods of fighting were evolved and new weapons devised, which, only at a later period, were adopted on other fronts.

It was in the Argonne forest that assault troops (Stosstruppe) were first formed from the picked men of the army. Countless deeds of heroism were performed by these men.

The system of "rolling up" enemy trenches was first developed in the Argonne. Infantry learned to handle mortars. Hand grenades, at first of a very primitive nature were first improvised there, and from them was gradually developed the stick grenade, which soon became one of the principal weapons of the infantry. Great progress was made in the construction of dugouts, when, from September, 1914, onwards, the French began to pour heavy and extraordinarily powerful projectiles upon the German trenches, against which the usual type of shelter afforded no protection.

Similar progress was made in the construction of field fortifications.

Enormous quantities of timber were used for strengthening the sides of trenches, road building, &c., sawmills being specially installed to keep pace with the demand.

In the Argonne, too, wonderful progress was made in the science of artillery observation and the spotting of enemy batteries by day as well as by night. It was here that artillery was first divided into two separate and distinct groups, viz., batteries engaged in long range shooting and others employed in fighting at close quarters.

The book dwells with pride on the warriors of the Argonne, a special type of man who became as hard as steel, whose outward appearance would have been a disgrace on parade; whose clothes were mended a hundred times and again torn into shreds; covered with mud and clay; hair and beard uncut and unkempt, and withal whose discipline and sense of duty were unexcelled.

“Gedenkwürdigkeiten aus meinem Leben.” Nach Gleichzeitigen Aufzeichnungen und im Lichte der Erinnerung. By General F. Bernhardt. Published by Mittler und Sohn, Berlin.

It is commonly believed, says a German reviewer of this book, that the profession of a soldier destroys character, and in particular the training given in the army of William II brought to the front only office-seekers and courtiers. General von Bernhardt is himself evidence that this is not the case. He always swam against the current and never made a secret of his criticism. Bernhardt wished to see a repetition of the Bismarckian policy between 1862 and 1871. He stood almost alone. Now, after the great collapse, he would appear to have been in the right, whilst his opponents assert that those who shared his ideas have been the means of isolating Germany in consequence of their ridiculous demands. The reading of these memoirs gives the reader an excellent impression of the life and work of the corps of officers of the Imperial Army.

“Kriegstechnik der Gegenwart.” By General Max Schwarte.

Published by Mittler und Sohn. Richly illustrated.

This book impresses the reader by the quantity of matter it contains and at the same time by its clearness. The book opens with illuminating observations on the nature of “Kriegstechnik.” Before the war the technical side of warfare was apt to be underestimated. This mistake would not be repeated in Germany had not the Versailles Treaty made it impossible to develop and apply inventions of a military nature. It is shown how month by month Germany is getting hopelessly behind foreign countries which enjoy full liberty.

“Unterrichtbuch für die Nachrichtentruppe und Truppen-nachrichtenverbände.” By Hauptmann Juppe. Published by Verlag Offene Worte.

This book consists of two parts : a general military and technical section, illustrated by quotations from numerous regulations, and a digest of the things signallers should be acquainted with in connection with the signal service. The book gives useful counsel in all questions relating to practical duties, whilst the technical section gives illustrations of switch-boards and other things, and should be useful to those interested in the technical side of signalling.

“Der Chemische Krieg.” By Dr. Rudolf Hanslian.

A second, revised and enlarged edition of this book has been published by Mittler und Sohn, 411 pages with 111 illustrations and 3 maps in colour.

The prospectus announcing the book states that the first edition, which aroused great interest at home and abroad, was sold out within a few months. The new edition has been entirely revised and includes a considerable amount of new matter. In addition to the military side of the subject the problem of protection against gas for the civil population and the development of protection in industry are dealt with. Quoting from some 300 official works of foreign origin, the writer gives a true picture of the present situation with regard to the technical side of gas in all countries. The quotations are not from newspapers.

Allegations concerning German re-armament.

During the last twelve months Germany has been continually accused of employing subterfuges to re-arm in defiance of the Treaty of Versailles. These accusations have been made in political speeches by leading men and in the Press both at home and abroad. The accusations made by Germans themselves have been by far the most virulent, though they were attributed to motives of the highest patriotism, a view not always shared by the Reich's magistrates if the “patriot's” capture was effected.

Allegations that Germany is re-arming still continue to be made, and for the information of those who do not have access to the foreign Press a summary of the principal past and present charges may be of interest.

Charge against the Chief of the Army Directorate.

In October, 1926, Colonel-General von Seeckt resigned his position as Chief of the Army Directorate, as a result of charges brought against him by the German Press. The case against him was that he had countenanced the enlistment of a soldier on an irregular engagement. The details of this incident were reported in the *Monthly Intelligence Summary*, November, 1926.

Charges brought by the English Press.

In December, 1926, a vote of "No confidence" caused the resignation of the German Government. This was due to attacks in the English Press, followed by a speech in the Reichstag by Herr Scheidemann, the Socialist leader, in which he accused the army of—

- (a) Obtaining munitions and money from Russia—munitions, including gas bombs, even as recently as this year.
- (b) Recruiting exclusively among nationalist organizations.
- (c) Obtaining subscriptions for the Reichswehr from private persons.
- (d) Permitting civilians to take part in Reichswehr manœuvres.

Herr Scheidemann was able to prove all his charges with the result that the Government resigned.

Count de Broqueville's charges.

Count de Broqueville, Belgian Minister of National Defence, in a speech to the Chamber of Representatives, delivered in February, 1927, charged Germany with making undue military preparations. He based his charges mainly on the army votes in the German Budget and on secret information to the effect that discharges from the army were in excess of the quota allowed by the Treaty of Versailles.

In a debate in the Senate in July, Count de Broqueville renewed these assertions. He remarked that, after the loss of Alsace-Lorraine, Germany still had a concentration zone, provided with a strategic railway system, on the Belgium frontier. In comparing the German Army with the Allied Armies, its apparent numerical inferiority was not so great when account was taken of the number of ex-combatants, the Schupo quartered in barracks and the men discharged before the termination of their legal term of enlistment, who could be immediately re-drafted into the army.

With regard to these illegal discharges, he had definite information to show that intellectuals were released after six months while others were liberated after three, five, six and even eight years.

He further stated that he was in possession of secret documents which showed that from the point of view of armament Germany had reached a stage which was disquieting for the future.

These charges were energetically refuted by the German Government, but the arguments advanced to explain the growing army votes were not convincing.

The Menschheit Article.

In the month of July last an article appeared in a German Pacifist journal called "Die Menschheit" which is edited by the well-known German pacifist, Professor Forster. Wide publicity was given to this article in the foreign press and it created a considerable stir, both in Germany and abroad.

The article opens by stating that frequently officers of the old Army meet in various places, in secret, and discuss the military problems of the day. It was at a meeting of this sort in Berlin, which was attended by the members of the old Naval Air Force and by Rittmeister Baron V. Freiberg-Allmendigen and Major (retired) V. Stephani, leader of the Berlin Stahlhelm Group, that speeches were alleged to have been made by the two last-named officers, the gist of which follows.

Political use of the Reichswehr.

It was most important that the regular army should never be called into action in connection with internal strife, as, in this way, it would lose the support of the Left (that is, the Socialist and Communist) Party, or at least their benevolent neutrality, which were necessary for its further development.

Conscription.

Conscription was undesirable, since, if it were re-introduced, both the social democrats and the communists would become trained soldiers. This was regarded by the speakers as a most undesirable thing.

Militia system.

The war had proved that quality, and not quantity, was required, and militia, consisting of only partly trained men, was therefore quite

inadequate, and it was for this reason that the regular army had evolved a programme by which men were to be trained for three years and made completely efficient in that time. Subsequent attendance at manœuvres for six to eight weeks every second year was to maintain the efficiency of these men, who would thus provide a powerful reserve.

European Army.

The French Army, on account of its short period of training (one year) and its heterogeneous political composition, is an army of defence but not of attack, and based as it is on its double line of fortresses, the German Army for many years to come would not be in a position to attack it. The Italian Army, on the other hand, has a strong offensive spirit, which makes it superior to the French Army and for this, as well as for other reasons, Germany must avoid an armed clash with Italy. The Polish Army "Germany's first opponent" could be easily disposed of by a German Army half its size. The Russian Army, on the other hand, is a force the power of which could not be accurately estimated as yet. The speaker mentioned that the possibility of a concerted European attack on Russia was something "which could not be rejected off-hand" but for which the German Army was not anxious.

League of Nations.

At Geneva, Germany's aim must be to obtain at the earliest possible moment full sovereignty over her own army and her own war industry. It was to be pointed out in this connection that German disarmament was intended to be the prelude to universal disarmament. No universal disarmament was taking place or was even in sight and Germany therefore had the moral right to re-arm and re-organize her war industry in accordance with the needs of a great Power. Now that the Commission of Control had been withdrawn from Germany, the only control over her armed forces was exercised through the League of Nations. It would be easy to render this control illusory by "a confusion of contradictory notes and paragraphs". When disarmament negotiations broke down, Germany would bring up for public discussion the following proposals with regard to her own re-armament:—

- (a) Engagements, instead of being for 12 years with the Colours, would be for three years, the remaining nine to be served

in the Reserve. In this way, in a few years, an army of half a million men would be created and it would be the best trained army in the world.

- (b) In addition to the above, 10,000 to 15,000 men would be engaged annually for one year only. On mobilization these men would be used as auxiliary troops, in which military training of a high order was not required.
- (c) The training units of the Army would be formed into an 8th Division, which would be located in Silesia (the present 3rd Division confining itself to the Province of Brandenburg).
- (d) The technical arms, that is, air force, tanks, heavy artillery, &c., would be considerably increased.

Stahlhelm.

The Stahlhelm was becoming annually weaker on account of the advancing age of the last-trained classes and the lack of complete military training amongst the young members. Under the new scheme, men on completing three years with the colours would become members of the Stahlhelm and would continue their military training in it. The untrained members would, on mobilization, be given positions in war industries.

Military colonies.

Of the 30,000 to 40,000 men discharged annually under this scheme, employment could be guaranteed to only 10,000 or 15,000. To dispose of the remainder, land would be allotted to them in the thinly-populated eastern frontier districts. As these districts became more thickly populated and the difficulty of finding land grew, so the desire to reconquer the Corridor would become intense and a national agitation for its recovery would take place in earnest. If this recovery did take place, the Polish population would be evacuated from there and very shortly afterwards from Upper Silesia also.

Mobilization of industry.

The speaker acknowledged that secret manufacture of arms took place in Germany and in German factories in foreign countries, but stated that the supply from these sources was entirely inadequate. A satisfactory plan, however, had now been evolved by which these difficulties could be overcome. (No details of this plan are given.)

It is, however, stated that the air industry could be converted to mass manufacture in from 2 to 4 weeks and could commence delivery in from 6 to 8 weeks.)

Sabotage.

Measures would be taken for defence against aircraft and against sabotage, which it was considered would be the expedient used by the anti-war elements.

Assumption of political power by the Stahlhelm.

The Stahlhelm and the Army would work hand in glove and the most propitious moment would be chosen to overthrow the existing political order of the Reich. The most likely moment would be on the return of a victorious army "from the Polish front, say." The Army would occupy the larger cities, while the Stahlhelm would seize the reins of governments and institute a new political era.

Wehrsport.

Training, to supplement the present Stahlhelm training, was already being organized under associations for Wehrsport. It took the form of small-bore rifle practice and physical training calculated to enhance a man's value in hand-to-hand fighting. This would provide a supply of auxiliary troops, or reinforcements, which would make a satisfactory mixture with regular troops in the proportion of 1 to 3.

Mobilization.

Bezirks kommandos (mobilization centres) had been established by Stahlhelm groups and they would undertake the supply of the first special reserves. A home defence force would be organized by the associations to deal with strikes and sabotage.

Legalization of scheme.

If, as is thought possible, the scheme is rejected by the League of Nations, Germany could merely pass a bill to make it law.

Conclusions.

The Menschheit sums up the programme as follows:—

- (1) The gradual training of a *force d'elite* and its equipment with all modern arms.

- (2) The slow permeation of the German nation by the Stahlhelm organization, aiming at strangulation at birth of any form of opposition and at preparation for the seizure of political power.
- (3) A victorious war against Poland.
- (4) The seizure of political power by the victorious army.
- (5) The establishment of a military and Stahlhelm form of State.

And concludes by remarking that it is obvious that this new State cannot carry on a policy of conciliation towards France.

Note.—The German Government issued a semi-official denial of all the charges brought in this article.

The scheme outlined is, however, not without interest since it shows the trend of military thought obtaining in certain quarters in Germany regarding the future development of the Army.

General Guillaumat's Despatch.

The following is a summary of the "intercepted" despatch of General Guillaumat (Commander-in-Chief, Allied Army of Occupation) to the French War Office which appeared on 6th August, 1927, in a French periodical "*Aux Ecoutés*." There can be no doubt that the reasons prompting its publication were mainly political, the object being to influence public opinion against the "pacifist" policy of M. Briand, particularly in so far as reductions in the Allied armies on the Rhine were concerned.

The opening and closing paragraphs of the despatch are given in full, the remainder are summarized.

"All reports received by my staff go to prove that, for at least a year, the German Government has been pursuing a plan for the formation, in occupied territory, of a force capable, should the occasion arise, of rapid action against us, and also in organizing this territory militarily.

The Government of the Reich has already been engaged for a long time in an effort to reorganize the military forces in unoccupied Germany, but the Rhineland, until quite recently, was left alone."

Recruiting and training of youths for military purposes.

A number of so-called "sport" associations have been formed, in which marching, physical training and tactics are taught by ex-officers and non-commissioned officers. Their object is to prepare infantry.

Although the activity of shooting societies is rigidly controlled by the Rhineland High Commission, the same severity has not been extended to officials such as foresters, policemen, customs guards, gendarmes, &c., of whom several thousands are armed.

Thirty-five riding associations (Reitervereine), about one-third of the total number in the "Reich," provide training for the future trooper and artillery driver.

The rapid development of these associations during the last few months can only be explained by the intervention of the German authorities.

Along our frontier.

Three air bases have been established, at Cologne, Frankfort and Karlsruhe, at which powerful squadrons could be concentrated. The programme for 1927 includes the operations of eight new air lines, and the creation of five aerial ports at Aix-la-Chapelle, Trier, Sarrebruck, Kaiserlautern and Pirmasens as advanced bases and, in addition, two landing grounds at Erbenheim and Spire.

Great activity is shown in gliding, which the Germans rightly consider the most efficacious local method for training pilots.

Equipment of the Territory.

The projected extension of the road systems, improvements to certain railways, the projected construction of new bridges over the Rhine and the Moselle and the growing use of mechanical traction are all measures undertaken to increase the rapidity of the concentration and of the transport services during operations. Wireless telegraphy is being developed and pigeons trained to facilitate intercommunication. The sanitary services, even, have not been neglected and numerous ambulances have already been formed.

Since Locarno Germany has pursued a policy of revenge.

In short, Germany is organizing the occupied territories for war. In 1925 this organization was backward when compared with that of the remainder of the country. The concessions made to the German

Government 15 months ago, which resulted in a more liberal régime in the Rhineland, have had as their only result the pressing forward of military preparations.

A grave conclusion.

“The presence, in occupied territory, of an Allied army of occupation, has, at least, the effect of hindering the development of a programme, of which there will be nothing to stay the execution, once the Rhineland is evacuated.”

Considerable improvements have been made in the road and railway systems all over Germany, particularly in the western frontier zone. At the same time similar development has been taking place in the air. From an economic point of view these improvements are justifiable, but their strategical value is obvious.

Notes on German Publications.

Entstehung, Durchführung und Zusammenbruch der Offensive von 1918. By General Hermann von Kuhl (retired).

Published by the Deutsche Verlagsgesellschaft für Politik und Geschichte, Berlin.

This is a special edition of the report prepared by the author for the Parliamentary Commission appointed to investigate the causes of the German collapse in 1918. The book is consequently intended to throw light upon the subject from a military standpoint.

In Part 1 the questions of man-power, recruiting and supply of food, equipment, &c., are dealt with, and the reasons are given which led to the decision to attack being arrived at. The author comes to the conclusion that in view of the situation as a whole there was no other choice left than to take the offensive. The difficulties incidental to recruiting, the effects of the blockade, the anticipated intervention of the Americans in the summer, and many other factors necessitated a quick decision being taken. The relative strength of the opposing forces was in favour of the Germans, and there was no immediate prospect of coming to terms with the enemy.

In Part 2 the carrying through of the spring offensive and the defensive battles of the summer are discussed. Military experts, both in Germany and abroad, express widely differing opinions with regard to the German command in these engagements. In view of the lack of full official accounts by all the belligerents it is necessary to exercise care in giving utterance to criticism. The author lays

considerable emphasis on the great difficulty of the task with which the High Command was faced. The choice of place for the attack and the plan of operations for the March offensive are lucidly criticized. General von Kuhl considers that the Army Command and General Ludendorff in particular deserve great credit for having been so successful in raising in the spring of 1918 an army ready and prepared to undertake an attack on such a large scale. The course of the individual attacks is sketched in outline and the writer gives his own opinion on points in dispute. Finally he takes to task Dr. Delbrück who, in his report, makes a personal attack upon Ludendorff, imputing to him the blame for the failure of the offensive. General von Kuhl defends Ludendorff and shows what a creditable part he took in the gigantic struggle—all he did being due to his love for his country.

Das Deutsche Soldatenbuch. Deutschlands Wehr und Waffen im Wandel der Zeiten. "Ein Ehrenbuch zur Erinnerung an Deutschlands Wehrhaftigkeit." By Major Peiss (retd.). Published by Fröhlich, Leipsic.

This is a monumental work in two volumes, with 1,400 illustrations and 24 coloured plates, which is calculated to foster the pride of the Germans in the military glory of their country.

In a series of 12 chapters are described the growth and maintenance of the German defence force during a period of 2,000 years. Commencing with the methods of fighting followed, and the battle array adopted by the ancient Germans, the book in word and picture presents the armies of the knights and mercenary soldiers, describes the origin of firearms and artillery, Frederick the Great's victorious hosts and the armies engaged in the wars of German independence.

Volume II gives a brief review of the wars from 1864 to 1870-71, and also a description of the army of the North German Confederation as well as of the Imperial Army and its expansion up to 1913. The section dealing with the Great War, in addition to a brief summary of the principal events, gives a good sketch of the great strides made in the production of new kinds of weapons and of the remarkable efforts made by the German munitions industry. Extracts from the works of well-known writers are given in praise of the heroism of the German soldier in battle. The work concludes with a description of the post-war volunteer army and of the new "Reichswehr" and its organization.

Der Sicherheitsdienst Beim Schiessen im Reichsheer für alle Waffen. By Hauptmann Zimmermann. Published by Verlag Offene Worte, Berlin.

This book contains all the regulations laid down in official manuals, which are to be observed in order to ensure safety in shooting with firearms, and also during practice in throwing hand grenades. The object is to prevent accidents and to supply a work of reference for those responsible for measures of safety.

In the main the book contains annotations to the official manuals ; it also gives appendices in the form of sketches on tracing paper, which need only to be superimposed on 1 : 25,000 maps to mark the danger zones on the latter. It should form a useful guide on the subject for the German soldier.

Die Deutsche Monarchie Eine historische Betrachtung. By Professor Dr. A. Repp. Part 1129 of the Pädagogische Magazin.

Dr. Repp enjoys the reputation of being an eminent historian. In this essay he discusses the principles of monarchy, which many thinking Germans believe to be the most suitable form of Government for their country in view of German character and history. The conclusion the writer arrives at is that if the Germans as a nation are to progress, they must revert to the form of Government which existed before the revolution.

Ergänzungen zu Streitfragen des Weltkrieges. By General E. Kabisch (retired). Published by Berger, Stuttgart.

The book entitled "Streitfragen des Weltkrieges" gives an abstract of the valuable literature on the war, incorporating the conflicting views of some hundred leading soldiers, historians and politicians, the writer drawing his own conclusions.

In this supplement the chapters deal with Plans of Operations, the Prittwitz Case, Conrad's Strategy. The Battle of the Marne, and the March Offensive of 1918. The author draws conclusions based upon new works on the subjects mentioned. The question of "Deutscher Westoder Ostantgriff" is cleared up. In the Prittwitz case the writer defends the decision of the Command of the 8th Army to break off the battle of Gumbinnen. In the chapter on Conrad's Strategy the responsibility of Conrad in opposition to that of the

Austrian General von Horsetzsky is established. In the chapter on the Battle of the Marne the tactical development which was fatal for the Germans is discussed, and finally on the chapter on the March Offensive of 1918, various contrary views are compared and discussed. It will be seen that the book provides information with respect to more recent important investigations and forms a useful work of reference on war literature.

Termination of Military Control.

On 8th September, 1926, Germany was elected a member of the League of Nations with a permanent seat on the Council. This necessitated a reconsideration of the whole question of military control, in which progress had recently been markedly slow.

Both sides demonstrated their willingness to make concessions, and considerable progress was realised, but when the Council of the League met again at Geneva in December, 1926, the ex-Allies were unable to report that German disarmament was complete. A number of discussions took place at this meeting between the ex-Allied Ministers for Foreign Affairs and Dr. Stresemann which resulted in the further settlement of certain points. In the meantime, the major points still in dispute were under discussion in Paris, where Dr. Clodius, the representative of the German Government, was in direct communication with the Conference of Ambassadors. By 12th December the situation was sufficiently clarified for the Foreign Ministers to initial an agreement at Geneva which arranged for the withdrawal of the Commission of Control from Berlin on 31st January, 1927. At the same time, it was decided to leave behind in Berlin a technical expert attached to the Embassy of each of the Governments represented on the Conference of Ambassadors, to oversee the execution of the settlements already reached or which would be reached prior to the withdrawal of the Commission.

After protracted negotiations, agreements were finally arrived at on the outstanding questions, and the Commission of Control ceased operations on 31st January, 1927, but stayed in Berlin until the end of February in order to write its final report.

The work of the technical experts.

The technical experts left in Berlin commenced work on 1st February, 1927, their functions being purely to ensure that the German

Government carried out its promises in accordance with the agreements already reached.

The main problems with which they have had to deal are in connection with—

The destruction of illegal fortifications on the eastern frontier.

The passing of the War Material Law.

The reorganization of the Police and the passing of Police laws by the various States.

The alienation of administrative establishments.

Changes in certain batteries of the coast defences, and

The dismantlement of fortifications in the Occupied Territory.

Of these, the first two can now be considered as settled, and progress has been made with the remainder, but it is as yet too early to be able to forecast the possible withdrawal of the experts.

Appointment of a British Military Attaché.

It was decided, on the withdrawal of the Commission of Control from Germany, to appoint a military attaché to His Majesty's Embassy at Berlin. Colonel J. W. Sandilands took up his appointment in March, 1927, and, in addition, will continue to act as Military Attaché to His Majesty's Legation at The Hague. His arrival was favourably received by the German military authorities, but he has not yet had the opportunity of visiting troops at training.

The legal advisers to the Conference of Ambassadors gave a ruling in 1926 that the clauses in the various Peace Treaties, forbidding the ex-enemy countries to send abroad any military, naval or air missions, could not be held to include military attachés.

The German Government have, however, not yet expressed their intention of appointing a military attaché to their Embassy in London.

Notes on German Publications.

“*Führung und Gefecht der verbundenen Waffen,*” Part II, 1923.

This is an official training manual dealing with the services which are either denied to the German Army under the Treaty of Versailles

or only allowed to a very limited extent, and includes the following sections :—

- XII. Aeroplanes, balloons, anti-aircraft protection.
- XIII. Tanks, armoured cars, armoured lorries, armoured trains.
- XIV. Gas.
- XV. Signals.
- XVI. Transportation (rail, road, M. T. and H. T.).
- XVII. Supply of troops in the field.

These regulations have now been translated into French and are obtainable from Berger-Lerrault, Editeurs, 136, Boulevard Saint-Germain, Paris (VI).

HOLLAND.

BARRACK LIFE AND DISCIPLINE IN THE DUTCH ARMY.

Summary of article which appeared in the "Telegraaf" of 1st September, 1927, by Captain, R. P. v. d. Sloot (Reserve of Officers).

Seldom has our army passed through a period in which it was so much out of public favour as it is at present, and never has its efficiency been so low. The reasons for this deplorable state of things are readily apparent to anyone who can keep his eyes open and observe. When, as a reserve captain of infantry, I rejoined the colours this summer, I noticed how much, and at the same time, how little things had changed since last I was with my regiment.

Is the money provided for the Army well spent?

A tree is known by its fruit, and the repetition training shows whether the system of training is sound. The recent repetition training at which I was present formed a valuable source of study for me. After spending two periods of 6 and 3 years respectively in civil life, during which I had practically little or nothing to do with military service, I was able to take my place with the troops as a company commander, and during this period I observed how lamentably behind the times our army system is right from top to bottom.

I cannot help thinking that this system is still based on the ideas which prevailed in the time of Tilly and Wallenstein (leading figures in the 30 years' war), when the officers were the thinking elements

the soldiers the living material, who were hired, kidnapped or pressed, and discipline, symbolized by the cell, the hangman's rope and the bullet represented the rein with which the slow-moving, brainless, living material was guided.

Officers and "Inferiors."

We now have a corps of officers who make a more or less serious study of military science, and we have soldiers who in these days are no longer pressed into service, but who are bound by law to place themselves under the command of officers. Between these two categories, officers and men, yawns, a deep gulf, which, by every possible means is intentionally kept open. I have purposely made no mention of the corps of non-commissioned officers, as the point is of minor importance to this discussion, for such a corps forms a part of the military technical apparatus and fits in the régime of the system, no matter of what nature the régime may be.

It will be clear what I am driving at. Our army, the embodiment of the defensive force of our citizens, who by virtue of self-made laws make a personal sacrifice to the State, has placed its destiny in the hands of a caste, an officers caste, in which tradition and tradition alone guides policy in every way. This caste must consequently be conservative. That is the reason why there is no concord between the community of officers and the civil community called up for conscript service; and that is the real cause of the lack of discipline in the Dutch army.

Every observer must notice, and every observer must wonder at the fact that the real discipline to be found in such institutions as orphanages and boarding-schools is so much better than in our army, which ought to be a living example of discipline. The explanation lies in the fact that the old system of brutal authority of the time of Tilly and Wallenstein is still preferred to moral authority.

Good fodder and a warm stable.

The régime described above impresses its seal everywhere. Let us commence with quarters and food. In the organization of these two primary essentials of life the army command is guided by the simple ideas of the farmer as expressed in the phrase: "Good fodder and a warm stable." If conditions in the world were the same as

existed two or three centuries ago, this principle would not be so bad, but society has undergone great changes. Machinery and mass production have brought within the reach of the masses comfortable homes and a certain atmosphere of refinement. In even the simplest and poorest families of Holland the desire for comfort has resulted in pleasant surroundings which are entirely lacking in the barrack-room. The best and most up-to-date room provided for the Dutch soldier is nothing more than a stable for human beings. The bed is an iron cot with a sack of straw thrown into it ; rough wooden tables are mangers on which food is served up, and hard wooden forms without backs remind us that soldiers are not animals that always stand erect. Some rooms are ventilated and provided with heating apparatus, but in these, too, the disgusting spittoons are never forgotten. In these habitations live for months on end the sons of our citizens, taken by law from, in many cases, refined homes, and owing to the lack of even the most primitive things, they are reduced to a state of brutishness.

Life in the barrack-room.

The unappetizing way in which the food is served explains why even the best of it is repulsive to those soldiers who have been accustomed to even a modicum of refinement. In barracks the food is still fetched from the kitchen in mess-tins, and meals are taken in the same rooms in which the men sleep, change their soiled underclothing, keep their dirty clothing, clean and oil their arms, and where the spittoons with their contents take away all desire for food.

The officers remain in these surroundings no longer than they can possibly help, and then only when compelled to do so by duty. They live out of barracks, return on completion of duty to comfortable homes and refined surroundings, and intuitively feel the ulf that separates them from the men in the barrack-room.

For the majority of young conscripts the time spent with the colours is a period of continuous humiliation, and it is consequently impossible for military service ever to become popular in Holland. It is with growing antipathy that the young fellows submit to the category of men who try to exercise authority over them, and at once and quite spontaneously the reaction is awakened in them which is directed against military authority.

This accounts for the satisfaction felt by the majority of soldiers when their comrades practise passive resistance and irritate their officers. This satisfaction is exhibited on occasions when disorders and mutinies occur, such as repeatedly occur during the period of repetition training. If such irregular behaviour has not taken place this year it is because sacrifices to authority have been made. It is obvious that in the present régime is hidden the germ of self-destruction. The effects are quite apparent both in barracks and during exercises.

If only those in authority had a better understanding of their task, a change for the better would result.

HUNGARY.

Termination of military control.

At the end of 1926 the policy of the Hungarian Government as regards the work of the Allied Military Control Commission in Budapest was suddenly changed, and the Allied representatives found a keen desire to settle all the outstanding questions in place of the active obstruction which they had hitherto encountered. Work progressed so rapidly that by the middle of February the Commission of Control were in a position to report that, in their opinion, they could cease active operations in the latter half of March, though they would require an extra month to complete their final report. This estimate proved correct, and control in Hungary was terminated on 15th May, the Allied representatives leaving Budapest the following day.

Appointment of a British Military Attaché.

As in the case of Germany, it was decided, on the withdrawal of the Hungarian Commission of Control, to appoint a military attaché to His Majesty's Legation at Budapest, and to acquaint the Hungarian Government that we were prepared to receive a Hungarian military attaché in London.

Major M. M. Parry-Jones accordingly took up his duties at Budapest on 31st May, 1927, which he will combine with those of Military Attaché, Berne, and, on the completion of control in Austria, of Military Attaché, Vienna.

Breaking-up fête at the Ludovica Military Academy.

On 25th June, the Ludovica Academy held their annual breaking-up fête. The Regent was present. Most of the officers of the Budapest garrison and a number of retired officers also attended. There was, in addition, an enormous crowd of relatives and friends of the students.

The programme was a very lengthy one and lasted from 3-30 p.m. until 7-45 p.m. It started with some good Swedish drill and free gymnastics of a very advanced type. The standard of gymnastics was quite up to the standard attained by non-commissioned officer gymnastic instructors at our pre-war long gymnastic courses.

Then followed a horse-jumping competition, and although the obstacles were not very formidable, yet the cadets handled their horses well and the performance, as a whole, was a very polished affair. The forward seat was adopted in all cases. This was succeeded by a hunting scene which, to English eyes, had a touch of the ridiculous. Three cadets, all dressed in full hunting kit with huntsmen's caps, led the field, which followed about 80 yards in the rear. The field consisted of about 30 other cadets all decked out in pink, green or black hunting coats with regulation white breeches, while some had bowlers and others huntsmen's caps on their heads. This lot took their fences in a compact body, a dangerous sort of performance, which produced a picture half-way between a point-to-point race and the first fence with the Staff College drag.

Then came a small cavalry patrol exercise which, in its turn, was succeeded by a mimic infantry battle. The battle was carried out very realistically, the cadets taking part giving evidence of careful training. There was a very generous allowance of blank. The arms employed in the attack, in addition to the rifle, included machine guns, trench mortars (used as close support artillery) and hand grenades, and a dummy tank. This consisted of a small track machine with a canvas body enclosing a machine gun. There were the usual realistic but fictitious casualties which were promptly dealt with by the stretcher bearers.

To relieve the strain the battle was followed by a burlesque bull fight and by what was designated "the young ladies company of the Ludovica." These young amazons went through some most

extraordinary exercises and dances and gave ample proof of the histrionic powers of the Hungarian cadet.

The fête ended with a pageant depicting the battle of Mohacsi, 1526, in which the Hungarians were completely routed by the Turks. This pageant was extremely well arranged and very picturesque, the costumes being all historically correct. Some 400 cadets took part. The pageant included 2 cavalry engagements, light and heavy cavalry, and 2 infantry engagements.

The whole performance took place in the grounds of the Ludovica, which are most extensive and admirably suited for spectacular enterprises of this nature. The impression gained of the cadets is that they are very highly trained, well disciplined, physically well developed (great stress is laid on all forms of games and physical culture) and their moral is undoubtedly excellent.

Investiture to the Order of Heroes.

On Sunday, 26th June, 1927, the annual enrolment took place of these selected for promotion to the Orders of Heroes (Vitez). 290 officers and 811 civilians were enrolled. The Order of Heroes consists of members of all classes, who are chosen on account of good war service. On being admitted to the order the member assumes the title of "Vitez" before his name.

The ceremony, which took place on the Margaret Island, was impressive. The parade ground was surrounded by a vast concourse of people. In the centre of the square were drawn up the candidates. The Ludovica Academy provided a strong guard-of-honour, in addition to which there were large contingents of boy scouts from the different surrounding districts. On a raised platform sat the Regent surrounded by Archduke Joseph and Archduke Joseph Franz, the Commander-in-Chief, and numerous members of the Government.

The ceremony began with four addresses delivered in turn by the head of each clerical denomination. These addresses were somewhat similar; they all touched on the past glories of Hungary, her present troubles, and the consequent necessity for steadfastness. After these addresses by the different prelates, the Regent made a speech, which is reproduced below.

Thereupon the candidates took the Vitez oath in unison, and were then invested with the order. They went up in batches of six, knelt before the Regent, who touched each on the shoulder with his sword

The ceremony concluded with a march past led by the Ludovica cadets who, as usual, gave evidence of their smartness. The companies of boy scouts that followed the cadets had more the appearance of well grown young men than of boys. They marched past extremely well and were evidently well drilled. Then came about 2,000 men in civilian clothes, former members of the Order of Heroes. They consisted mostly of men between 28 and 45 who, as heroes, must *de facto* have distinguished themselves during the war. This body marched past in column of route keeping perfect sections of four, and it is evident that their value as a reserve of non-commissioned officers is considerable.

The ceremony was most impressive. It gave evidence of the unconquerable spirit that animates patriotic Hungarians and at the same time was an example of how, by fostering traditions, and encouraging ceremony, they feed the flame of patriotism. All sensible Hungarians realize that for the present their hands are tied and that nothing is to be gained by kicking against the pricks, but while waiting for better times, they are determined that the manhood of Hungary shall retain its virility and that the flame of patriotism shall burn brightly.

Admiral V. Horthy's Speech at the Investiture of the Order of Heroes, 26th June, 1927.

"To-day, when a grateful Fatherland, through my hand grants you admission to the Order of Heroes I ask of you that, as long as no danger threatens the country, you will display your patriotism, of which you have furnished ample proof on the battlefield, by pursuing diligently your daily tasks. Therefore be heroes in Christian charity and in productive work and see that you are guardians of social peace and order.

Never perhaps has there been so much discontent in the world as to-day, never has humanity been enticed into false paths by so many misleading catchwords.

You, my good comrades, the flower of Hungarian patriots, must be on your guard and remain at your posts. You must preserve, cherish and develop the virtues displayed by our ancestors on Hungarian soil in pristine days in the defence of this beautiful land. If we fail in this task it will come about that others, who are unfit to govern, will bring about the downfall of this country.

The duty, as well as the heartfelt desire of every honourable man is to protect the weak and infirm, and to lend succour to the fallen. If, however, under the guise of this splendid task the weak are reared in hate, the fallen left prostrate, and instead of being helped, are incited to rebellion, then a state of affairs will occur which cannot be tolerated by a community determined to flourish.

This sound policy is being fathered among all civilised nations and, as far as we are concerned, we shall ensure that chaos does not become supreme in our midst, for in the gigantic task of reconstruction we are dependent on peace and order.

The prosperity of the country depends on the development of moral and mental forces and upon the whole-hearted co-operation of all classes of society.

We are very desirous of co-operating with everybody who is prepared to serve honourably our Fatherland and race, but we are, as someone has so aptly said, arch enemies of revolt.

Therefore, always lend your strength to Hungary's just cause and may God be with you on your paths."

IRAQ.

Sheikh Mahmud.

In accordance with an arrangement made during his previous visit to Panjvin, Sheikh Mahmud came into Sulamaniya in June. He proceeded thence, in company with a local official to Baghdad where he had an interview with the High Commissioner on 6th June. Sheikh Mahmud's submission has caused the majority of his tribal followers to disperse to their homes.

Since his visit to Baghdad in July, Sheikh Mahmud has been living at Walagir, in Persia. On 31st July, however, Sheikh Mahmud reported that he had received written instructions from the local Persian military commander to quit Persian territory. Failing compliance he would be forcibly ejected.

Sheikh Mahmud was, therefore, informed by the Iraq Government that he could still choose between Baghdad or Mosul as his future place of residence.

The King.

The King left by air for a visit to Europe on 6th August having arranged for ex-King Ali to act as regent during his absence.

Sheikh Mahmud.

Despite the orders which he received to quit Persian territory, Sheikh Mahmud continues to remain in the Persian district of Piran. The Avroman chiefs have provided him with a personal escort and are reported to be in favour of attacking the Persian Government forces if they try to eject the Sheikh. Meanwhile, the latter has again been informed by the Iraq authorities that the previous offer of a residence in Baghdad or Mosul remains open.

Iraq-Turco Boundary.

On 9th September the delimitation of the Iraq-Turco frontier was completed by the placing of the final pillar on the Persian frontier at its junction with the new Iraq-Turco boundary, and the Boundary Commission, appointed under the auspices of the League of Nations, started to disperse.

JAPAN.*Revised Law of Conscription.*

On 1st April, 1927, the revised Law of Conscription was issued in the Official Gazette in Tokyo, and will be effective from 1st December, 1927.

Under the new law the legal period of colour service in the Japanese Army has been reduced by 1 year (from 3 to 2 years) and the period of service in the 1st Reserve has been correspondingly increased (from $4\frac{1}{2}$ to $5\frac{1}{2}$ years). As, however, it has been the practice for some years to release men on furlough for the last year of their colour service, the effect of these articles is merely to legalise this established practice and definitely to allot this period to service in the 1st Reserve. By these articles, therefore, no material change in existing conditions affecting the training or efficiency of the army as a whole has been introduced.

A more important innovation is the further reduction in the period of colour service which may be granted in respect of men who have, previous to conscription, passed a satisfactory course of military instruction either at school or in a Young Men's Training Centre.

One of the new articles prescribes a minimum of 5 months' training with the colours for successful graduates of normal schools in which teachers for Government schools are trained. These men

pass direct from the colours to the national army where they have practically no further connection with military life, and their short period with the army is principally designed to instil in them something of the virtues inherent to military life before they launch forth on their career as moulders of the young mentality of the Japanese Empire.

The most far-reaching innovation of the new law is the article which allows of a reduction by 6 months of the colour service of men who have previously passed the course at school or at a training centre. This concession will be applicable to the great majority of future conscripts and this, with the interval of about $1\frac{1}{2}$ months which elapses before recruits actually join the colours, reduces the actual period of training with the colours to one of approximately $16\frac{1}{2}$ months.

The period served by "1-year volunteers" is now reduced to one of 10 months.

The general effect of the law is to mitigate the incidence of conscription on the people. Not only is the actual period during which the conscript is kept away from his normal avocation reduced, but the possibility of exemption or postponement is somewhat enlarged. Conscription under the old terms was becoming unpopular, especially among the professional classes, and the new law will go some way to meet the causes of this unpopularity. On the other hand, so short a period of training will aggravate the problem of the supply of efficient skilled men in the technical services of the Japanese Army, and it is not yet clear how the authorities propose to meet this difficulty.

LIBYA.

Italian military operations in Cyrennaica.

Ever since 1919 the Italians have been energetically carrying out the pacification and extension of their control in their Libyan colonies—Tripolitania and Cyrennaica. In the former they have met with considerable success, and that colony is probably as peaceful, and their control over it as extended, as it is likely to be for some years. In Cyrennaica, however, they have been less successful, and have been engaged in practically continuous minor military operations against the local Arab tribes who are by no means inclined to surrender passively to Italian domination. The Italians had hoped that

as a result of their occupation of Jarabub in 1926, following on their agreement with the Egyptian Government concerning the frontier between Egypt and Cyrennaica, their difficulties would have terminated and their control have been rapidly established in that colony. Such, however, has not been the case, and following on a succession of minor rebellions, the situation finally reached such a pitch at the beginning of the year that military operations on rather a larger scale have had to be carried out.

The tribes with whom the Italians have been in contact are the Mogharba who occupy the country from Agedabia to the frontier of Tripolitania and east of them the Awaghir who surround Bengazi on the south-east and west. East of the Awaghir are the Abid; east again the Braasa, and still further east the Abeidat, but there appear to be no boundaries accepted by tribal custom as forming anything approaching a division between these tribes.

The Awaghir is by far the largest tribe, and may be roughly divided into two main sections, (i) those in the north who are more accustomed to contact with the Italians and townsfolk and at present give no trouble, and (ii) the southern section, which stretches away towards the desert and finally becomes so blended with other tribes, from still further south as to cease to be clearly marked as a separate entity.

As regards the former of these two sections, their tranquillity is assisted by the fact that Zuetina and Agedabia, which are their two main markets, are both very exposed to attack by the Italians.

At the end of 1926 the Italians were in occupation of the country between the coast and a line running approximately parallel to it about fifty miles inland. Along this line they had established a chain of military posts. At the beginning of this year the Arabs, angered by the execution of certain rebel sheiks, and stirred up by one Sayid Omar Mukhtar who was imbued with a spirit of nationalism and set himself up as a budding Abd-el-Krim, attacked the more southerly of these Italian posts and met with a certain measure of success, actually penetrating to the coast at one point midway between Derna and Tobruch, thereby cutting Italian communications along the coast. Their success was sufficiently dangerous to necessitate active measures on the part of the Italians with a view to exterminating, once and for all, the rebel element and re-occupying the abandoned posts.

The Italians, however, were to suffer further at the hands of the rebels before the main operations could be inaugurated.

For the purpose of consolidating land communications between Bengazi and Agedabia, the Italians in March advanced and occupied a line Agedabia—Saunno—Msus, further to the south. Unfortunately for themselves they announced openly for months their intention to advance and occupy this line with the result that all element of surprise was lost, and while carrying out their intention they met with considerable disaster. The actual advance was made, and the line found entirely undefended but a band of Bedouin Arabs who were co-operating with the rebels were seen on the flank and a column was sent out to deal with them. The Arabs decoyed this column into advancing too far and surrounded it. Two complete companies of the 7th Libyan Battalion and their officers were annihilated, and so many of the rest of the column were killed and wounded or deserted, that the battalion ceased to exist. In addition a battery of mountain guns, machine guns, ammunition, mules, 500 rifles and all the remainder of the train, was lost. There can be no doubt that, thanks to the Italians, noising abroad their intention, the Arabs had deliberately not held the threatened line, but had outflanked the Italian column on their eastern flank and delivered a counter-attack which, aided by treachery on the part of "friendlies," was entirely successful. The question arises how semi-savage Arabs could have learnt to make such a really effective and dramatic counter-attack upon a really vital point of the Italian coastal system, and how they could have selected a spot so accurately without some guidance. There is nothing definite to show, however, from whence this guidance could have originated.

In spite of this reverse, however, the Italians remained in possession of the newly-occupied line while preparations for further operations were being put in hand. At the same time during April and May further minor operations were carried out to the north and east, resulting in the rebel concentration being broken up into isolated groups, and the occupation by the Italians of the water-holes, wells and "cisterns" in the wooded high ground preparatory to a summer campaign. These minor operations aimed at driving the rebels right through the water-belt so that they would find it increasingly difficult to maintain themselves and their cattle, and it would thus be easier for the Italians eventually to round them up.

The prospect of a summer campaign was welcomed by the Italian troops who were very optimistic of their ultimate success in dealing with what they described as "a mere rabble of about 10,000 rebels."

Meanwhile the colonial garrison was being strengthened by reinforcements of National Militia (Fascisti) from Italy, and troops from Eritrea. By June the Italians, commanded by General Mezzetti, were ready to commence operations. General Mezzetti had already had considerable experience in Tripolitania, where he had been very successful in working with a system of "columns" by which an enemy was encircled. His scheme of operations in Cyrenaica was based on the same system, and his object was to continue to drive the rebels out of the forests and water zones, at the same time bombarding their herds and caravans by aeroplanes and artillery. Once they had been driven out of the wooded zones, every effort was to be made to keep them in the waterless district where they were to be repeatedly bombed. To carry out this scheme General Mezzetti took with his columns an enormous mobile reserve of water which rendered him independent of any wells or water-holes.

A column consisted of a battalion of infantry whose commander commanded the column, a section of cavalry (something less than a squadron) and two guns of mountain artillery, but no field artillery. The infantry were for the most part Eritrean battalions containing many Abyssinians with a few Cyrenaican natives interspersed in one or two of the battalions.

By 9th July the work of encirclement was nearly complete. While it was being carried out various caravans were met with and dispersed, the rebels suffering considerable casualties in men and cattle. Aeroplanes took part in these minor encounters, chiefly with machine-guns. These partial successes, however, were not followed up by the complete success desired, as the rebels broke up into small bands and adopted guerilla tactics. As a result General Mezzetti was no longer able to maintain a definite line of encirclement, nor could he find any concentration of rebels worthy of an attack, and the operation degenerated into one of surprise attacks and ambushes by mobile rebel groups. It appeared as if the large columns employed were proving too unwieldy. They were very expensive, wore out the troops, and achieved little except on the few occasions when they

arrived at striking distance of caravans and herds. Moreover as these herds and caravans could easily escape notice, even if only a few yards away on the other side of a hill, it would appear that these trivial successes were achieved more through luck than strategy. In Tripoli General Mezzetti was used to sending out his columns in more or less parallel lines which were sufficiently near for firing to be heard if one column was attacked, and thus enable its neighbours to converge to its aid. In Cyrennaica this was not possible. The country in which the operations were being conducted resembled a miniature Switzerland, with the slopes of the hills thickly wooded. A column could quite easily pass along a valley with the enemy only a hundred yards away on the other side of the hill, and it could be quite easily wiped out if large enemy bodies combined to attack it, without its nearest neighbours being any the wiser. Moreover the rebels, who are tenacious warriors, were operating in small bands and apparently usually knew the Italian movements. The wooded country made it easy for them to reconnoitre singly or in small parties, and many such small groups could unite to strike a surprise blow at some single Italian column and then dissolve into small parties again. As a result, although General Mezzetti persevered with his operations, and although the six columns used in the attempt to round up the rebels met with a certain amount of success, the latter succeeded in avoiding the complete encirclement and the complete extermination with which they had been threatened. On account of his partial failure to achieve his complete object General Mezzetti then decided to abandon his operations and to return to Bengazi. During his return, however, he proposed again using his columns as "pincers" in case any important bodies of rebels should be encountered. As it turned out, during his return march he fell in with a rebel body about 500 strong who had taken refuge in a position which they regarded as impregnable. A sudden attack was organized and the Italian forces, moving in seven parties, completed the encircling of the rebels. Sharp fighting continued for three days, during which the insurgents unsuccessfully tried to break through the lines of the Italian forces. The capture of the last stronghold of the rebels brought the action to an end. The enemy was practically destroyed, and a great quantity of stores of various kinds and of war material fell into the hands of the Italians. This was the severest blow that the rebels had had for a long time, and the loss of practically all

their flocks and provisions hit them even harder than their very considerable losses in killed and wounded. Moreover the moral effect on them must have been very great as the "impregnable" position they had occupied was completely cleaned out, and they can no longer cherish any illusions as to the determination of the Italians. This success was followed almost immediately by another, in which a whole rebel tribe was caught by an Italian column operating with armoured cars, pursued for a distance of 25 miles, and completely destroyed.

As a result the rebels have been completely dispersed and broken up into small groups, while the desert Bedouins have had enough and are abandoning their friends of the coastal district. General Mezzetti has re-occupied all the water-holes and main strategic points with small mobile garrisons, and the rebel survivors, whose morale is completely shattered, are in very hard straits. Sayid Omar, although twice nearly captured, has managed to escape, and it is thought that he and other fugitives will try to reach an oasis well into the desert, but owing to their losses in herds and lack of water many will probably die on the road from thirst and starvation.

Incidents in the campaign.

Climatic conditions made the operations very arduous. It was bitterly cold at night and terribly hot by day, the temperature rising often to over 120° in the shade. There were many cases of heat stroke amongst both men and animals. The drinking water was often almost hot, ice arrangements being only sufficient to allow of its issue to the General and the wounded. Under these conditions the troops had to carry out continual marches and had little sleep. What fighting there was was terribly severe with the Italians usually at a disadvantage against the more mobile enemy, and as a result of the combination of these circumstances a certain amount of discontent existed owing to the fighting being classed as "Rissa," i.e., local disturbances, which means that the dependents of officers killed do not receive the ordinary pension paid when an officer is killed on active service.

The characteristics of the Eritrean troops are of interest. While they would stand no chance against well-disciplined white troops in open fighting, they are of great value in irregular fighting in tropical heat on account of their powers of endurance. In peace-time each

receives 4 lire a day (about 1s.), and feeds himself. Being very frugal and usually abstemious, most of them economise even on this small sum which is additional to their pay. On service they draw free rations in addition to this money. During the operations described above they received the following rations:—

Tea and bread ration for the day at sunrise.

One tin of sardines or other tinned provisions between two men
for the whole day.

A water ration for three days.

All booty, whether food, live-stock, carpets, &c., was the property of the other ranks.

They have unfortunately, however, a fatal defect in abandoning their objective whenever booty is in sight, which is perhaps only natural in view of the above. Whenever they succeed in capturing an enemy camp they proceed to scatter and plunder it, and celebrate their victory by martial songs and dances. When booty is in sight they fight gallantly, but their subsequent conduct would lead the more cold-blooded observer to add in his own mind "And while they are behaving in this way the rebels manage to break off contact," which is, in fact, exactly what happens. Their officers can do little with them when they are in this frame of mind. Pursuit seems to be solely devoted to the object of plunder, and the hardly-won advantage is never pushed home while the enemy is given ample breathing time. That the Italians themselves are aware of this weakness is shown by the fact that in the latter part of the above operations white troops were used in the final drive thereby enabling the Italian troops to benefit from the gallantry of the Eritreans in the actual assault.

PERSIA.

Conscription.

It is reported that, up to the middle of August, 1,050 conscript recruits had been enrolled in the districts of Sabzawar and Nishapur.

Shah.

The Shah, who is at present touring in Azarbaijan, arrived in Tabriz on 1st September. There has been a certain amount of unrest in the outlying districts of Persian Azarbaijan, principally amongst

the Shahsevens, and it appears that the Shah's object in visiting the province is mainly to establish personal touch with these somewhat independent people.

Army Organization.

An Army Order has recently been published abolishing the headquarters of the Central (Tehran) Division. The cavalry brigade, 2 infantry brigades and artillery brigade which composed it will, in future, be independent units administered directly by the War Office.

It is not yet known whether this change is part and parcel of a deliberate policy to abolish the divisional system of organization, or whether it is merely the result of the Shah's displeasure with General Murteza Khan, the late commander of the division, who has now been placed on the unemployed list.

SOVIET UNION.

Political Situation.

1. The following memorandum, based on an article by the Moscow correspondent of a Riga paper, gives a general idea of the internal political situation in Soviet Russia at the end of July.

2. The Genesis of the Opposition.

The foreign policy, the answer to the Chamberlain Note, the week of Defence, the increased armament in the army and Oscaviachim, are questions which have recently been much in the foreground in the political life of the Soviet Union, and one might almost believe that the question of the Opposition has already been shelved. This, however, is not the case. Although the matter has officially been declared to be negligible, the importance of the Opposition must not be undervalued, nor, on the other hand, should it be overvalued as is undoubtedly the case abroad.

It must not be forgotten that the Opposition is in no way a new, or a temporary, movement, but has always existed. Not only since the revolution, but since the existence of the Party has the Opposition from the very beginning been led by Trotzki. One must not be deceived by the temporary rôle played by Trotzki in the Soviet Union (his political significance was considerably exaggerated during the militant period of communism) but must remember that he was always in the Opposition, remained there, and that lately he has

always been defeated. One can almost say that he has never been a Bolshevik (in the sense that Lenin was). Only in the year 1917, a few months before the revolution, was Trotzki officially known as a Bolshevik ; until then he had formed his own party, and had taken up a position midway between the Bolshevik and Menshevik wings of Social Democracy. In this he was for a time more closely allied to the Mensheviks (he was president of the first (Menshevik) Soviet in the 1905 revolution). Since joining the Bolsheviks, Trotzki has always been a very active and useful, but uncomfortable member of the party. We see him continually in the rôle of "l'enfant terrible."

At the same time Trotzki has never been the wonderful political leader, as one has been so often led to believe. He is, however, a brilliant speaker, and an intellectual journalist. He was used as such by Lenin, but not as a politician, as he always wished.

It will be remembered that he commenced his career after the revolution as Foreign Commissar, but his short *début* in foreign politics was a complete fiasco. After only a month's tenure of office he had to leave and was replaced by Tchitcherin. The formation of the Red Army was then his chief work, i.e., a work of organization. His most brilliant epoch was during the period of war communism, when Lenin was still alive and when he (Trotzki) kept politically quiet as never before or since.

Only after the death of Lenin did he again appear politically, and immediately in the Opposition. He caused the party a good deal of trouble, in particular by his book "The Year 1917," which severely compromised his party colleagues, and was soon banned. The result was his frequent compulsory leave of absence, which quietened him down again.

At present he is again on "leave," and contrary to all reports has neither been banned, nor shot, but sits in the Kremlin and works as a member of the Central Committee of the Party, from which, it is true, a proposal is being made to exclude him and his adherents. They want to get this uncomfortable person off their necks ; whether, they will be able to is questionable, but there is time, and Shubin the Chief of the Press in the Foreign Office, says that the decision will be reached during the autumn. Shubin looks upon the question as wholly a theoretical difference of opinion of no importance and estimates the supporters of the Opposition in the party at about

$\frac{1}{2}$ per cent. This is naturally the coloured official version for the benefit of foreign journalists. But even if the percentage should be considerably more, the crux of the matter does not lie in the strength, but the violation of party discipline on the part of, the Opposition. The position is therefore not as harmless as it is pictured, and the leaders of the Opposition are threatened with expulsion. There is a reason also for the postponement of the expulsion. The masses must first be prepared for Trotzki's exit, and the interval is without doubt being used successfully to further this end. The theorists of the Stalin group are pulling to pieces the "platform" of the Opposition. In the provinces information is being broadcasted, and the "Pravda" daily reports strong feelings expressed by the provincial Soviets against the Opposition. In this connection, the ruling group (Stalin, Bucharin and Rykov) have a considerable advantage in being able to refer to Lenin. This fact must not be overlooked. It was thought that the great popularity of Trotzki would alone considerably strengthen the situation of the Opposition, this is not so; only one popular name exists in Russia to-day—Lenin. His name is holy, every word of his is "dogma." Whoever refers to Lenin must be right.

The principal theorists of Leninism have always been Bucharin and Stalin. Their main "argument" against this Opposition is that its ways are contrary to those of Lenin and Leninism. There were always big differences between Trotzki and Lenin, even at the time when their names were mentioned in the same breath, but then they were less known, now they are more in the public eye. Trotzki suffers considerably as a result of this. In the Lenin Museum, where big crowds assemble daily, there hangs a cartoon entitled, "Mice burying the Cat." Tom cat Lenin is sham-dead, and the Mice, included among whom is Trotzki, are celebrating a big feast with song and dance. Then the cat awakes and eats up all the mice. This cartoon is continually referred to at every opportunity, and Trotzki is particularly shown up among the many other mice.

Trotzki has completely lost his popularity, and his expulsion from the Central Committee will doubtless meet with no strong Opposition.

3. *The importance of the Opposition.*

Passing over the question of expulsion, and not taking into account the disciplinary offence of Trotzki and Zinovie, the importance

of the Opposition still rests on reasons not as yet enquired into. This new, and still unaccepted, importance of the Opposition can be explained as follows:—

When the Opposition lately appeared again, it took foreign policy as its target. In spite of the ruling group not acknowledging it, the present foreign policy of the Soviet Union is actually being led by national or state, but certainly not by international, motives. This is the case in the conflict with England, as well as in the support of the nationalist movement in China. It is on this that the Opposition pins its criticism, and it is in this that they see the great mistake of their opponents. Trotzki faces them with: "They don't want a world revolution, they are not fighting for the world's proletariat and against the world's bourgeoisie, but for their State, for their U. S. S. R."

The Stalin group answers by saying that the first and only proletarian country in the world must fight against the strongest enemy. That at present is British Imperialism. For this purpose all means are justified, even a temporary alliance with the bourgeoisie (as in China).

Whereas the Opposition wants to consolidate the accomplished successes of the revolution by the promotion of a world revolution, and only accepts this course, the Stalin group is inclined towards first-class power politics and thereby to the defence of the past achievements of the revolution.

That is one side of the matter. The second less obvious, but nevertheless still important question is that of the position with regard to the peasants. The proletarian Opposition drew its chief support formerly, as it is doing to-day, from the (international and industrial) working class. Lenin, however, invented the "Smytschka" (union) with the (national) peasantry, and turned his attentions decidedly towards the country. His successors of to-day reproach the Opposition and declare that they are preaching the "Rassmytschka" (disunion), the exact reverse, and that "they want to build up a country with the exclusion of the several million middle peasantry" ("Pravda," 12th July). This is not Leninism any more, nor Bolshevism—it is Menshevism, Trozkiism, or as it has been lately called, "Neo-menshevism."

These things become particularly important in so far that in them, as in the case of foreign policy, lies hidden the question of the purely national character of the revolution. Since the issue by Lenin of the "Smytshka" watchword, the development of it has necessarily progressed on national lines. Lenin could follow this path, Trotzki cannot.

Just because of the strong emphasis laid by him on the peasant element, Lenin was in spite of all a national leader. This can be observed even to-day from the fruits of his work. Trotzki, on the other hand has remained constantly the internationalist.

This point is particularly important on account of certain less known changes which have come about in this connection. In the Opposition, which hitherto has been solely led by individuals of Russian nationality (Trotzki, Zinoviev, Radek and Kamenev), non-nationalist Russian elements are continually beginning to assemble, and according to official news several nationalist Russian supporters have lately left the ranks of the Opposition. Therefore problems of quite a different nature arise, which will not be gone into in this article. As in the case of the personnel, so it is also in regard to the political motives. The policy of the ruling group (Stalin, Bucharin and Rykov) is, nevertheless, still Russian, or rather, Eurasian and Oriental; that of the Opposition, Western European. Great hopes have been placed on the Opposition even to-day. But this is unfounded, because the Opposition wants just what in Europe is known as Bolshevism according to its aims, not methods), namely, world revolution, dictatorship of the proletariat. The break up of the Soviet system as a result of the Opposition is hardly to be expected, but in power it would by its western appearance primarily occupy itself with the promotion of class war in the west, i.e., it would give up the anti-British "first-class power politics," and endeavour by all means to bring about a revolution in the territories of its western neighbours. First of all would most certainly come the Baltic States.

Manœuvres.

Manœuvres have been taking place (21st-24th September) in the South-Western Ukraine.

A Blue force, supported by a naval force, landed at Odessa and was opposed by Red forces operating from Beresovka.

Territorial formations took part.

SWITZERLAND.

New Military Penal Code.

The Swiss National Assembly passed the new military penal code on 13th June, 1927.

The late code dated back to 22nd August, 1851. In Swiss eyes the great fault in the old code, promulgated three-quarters of a century ago, was that it only catered for two categories of military service, namely, peace service (*i.e.*, recruit training, repetition courses and manœuvres) and active service.

According to the old law active service, although primarily applicable to actual hostilities, yet also included the occupation of the frontiers such as took place in 1870-71 and 1914-18. When this law was passed, long periods of frontier service without any actual fighting were not envisaged. The result was that numerous penalties laid down for active service became too severe when applied to protracted periods of frontier guarding. This was one of the chief factors leading to the introduction of the new military penal code.

The new code prescribes three categories of service—peace service, active service and war service—and grades punishments accordingly. For instance, the death penalty only applies to war service and to the most serious offences (murder, cowardice or treason) and even then courts-martial can substitute imprisonment.

Again the number of cases which necessitated civilians being brought before military courts was excessive and was the cause of unnecessary hardships during the years 1914-18. By differentiating between active service and war service it has been possible to curtail substantially the cases which must be brought before a military court during active service as newly defined.

In addition to the ameliorations in the law quoted above, the new military code introduces two innovations:—

- (a) Conditional punishment, which allows of the offender foregoing his punishment providing he refrains from further crime; and
- (b) Conditional liberation, which allows of an offender being liberated provided he continues to behave in an exemplary fashion,

A revision of certain disciplinary punishments has taken place. For instance, fatigues and C. B. have been replaced by reprimands for trivial offences. Further no one below the rank of Captain can award a punishment and his powers are limited to five days confinement and three days solitary confinement.

Subalterns and non-commissioned officers can only recommend but not award punishments. The soldier has invariably the right to appeal.

The first draft of the present code was drawn up by Professor Hafter in 1917 and subsequently completed by a Commission of Experts in which Colonel Albert Maunoir of the Judge-Advocate's staff, took a leading part. Colonel Maunoir also introduced the bill into the National Assembly.

TURKEY.

The General Election.

The general elections which took place recently in Turkey were completed on the 2nd September.

The elections were spread over a period of several weeks. The system in vogue is proportional and all males over 18 years of age are entitled to vote. These primary voters elect secondary voters who in turn elect the Deputies. In this first step the electorate are, and as far as is known were, able to express their views, but the Government of the day had, by deciding who were to be allowed to stand as Deputies, eliminated any expression of free will by the secondary electorate. Lists were published a few days before the second elections took place giving the names of those who had been selected by the Government to stand as Deputies.

Out of about 1,000 names 315 persons had been selected. This was the exact number of vacancies in the Assembly. Since these persons had been chosen by Mustafa Kemal Pasha, General Ismet Pasha, Prime Minister, and Safvet Bey, Secretary General of the People's Republican Party, with the very greatest care from persons who were supposed to be strongly in favour of the Government, any possible opposition in the coming Assembly must be considered to have been stifled completely.

Mustafa Kemal Pasha had been perfectly frank in his electoral manifesto, in which he stated quite definitely that the People's Republican Party could tolerate no discussion or discord in the coming Assembly, and that no person who had manifested Opposition tendencies, no matter how vague, would be permitted to stand for election.

It had, however, been considered possible that certain of the Progressive leaders might stand for re-election such as Generals Ali Fuad Pasha, Kiazim Kara Bekir Pasha and Jafar Tayar Pasha, particularly as the former had been received in audience by the President a week or two before the final elections took place. It is believed that General Ismet Pasha, the Prime Minister, was responsible for these persons having been prevented from standing for re-election.

This ultra-undemocratic method of electing members of Parliament received a good "press" from the English papers. *The Near East* remarked that, as the importance of the work of Parliament was beyond dispute, the Government was hardly justified in entrusting such important business to a miscellaneous collection of people who had little or no knowledge of the duties and responsibilities entailed.

Among the members of Parliament who were selected by the Government and elected by the people, there were 49 officials, 46 farmers, 40 officers, 34 lawyers, 25 teachers, 25 merchants and 25 journalists.

It is difficult to appreciate the attitude of the people to this abuse of their electoral rights, but the decision of the Government that the new Deputies would not be allowed to take part in the administration of either Government monopolies or private companies has been universally welcomed throughout Turkey.

It is, however, believed that there are a number of persons, including prominent politicians and rich bourgeoisie, who are opposed to Mustafa Kemal Pasha's government.

There are at present 150 leaders of various opposition parties banished from the country. The majority of these are living in Greece and are said to be endeavouring to engineer an underground movement against the Government, no doubt largely owing to their inability to express their opinions through more orthodox channels.

In this connection it is interesting to note that a band under Hadji Sami, recently landed in Turkey from Samos with, it is said, the intention of dynamiting the special train that was to convey the President from Constantinople to Angora. Actually, the leader of the band and his brother are stated to have been killed in an affray with the Turkish authorities at Kushada near Smyrna. According to Turkish police statements which have appeared in the Press, the members of the Opposition in Greece were implicated in this attempt on the President's life.

On 20th September, the Turkish police in Constantinople raided a house where they captured certain members of a murder gang which comprised one Turk and three Armenians. This gang was stated by the Turkish police to be part of a revolutionary group that had intended to blow up the Presidential train at an early date.

It is not easy to assess the value of these police statements, as though in both cases it is possible that the Opposition were planning a repetition of the attempt on the President's life of the previous year, the plots may have been manufactured by the police themselves. In an autocratic country a plot may be the means whereby the Opposition can be rounded up on a fictitious charge of implication.

So far, no attempt has been made, as was done last year, to implicate leaders of the Opposition in Turkey in either of these instances.

It is therefore possible that, as Colonel Sherif Bey was only appointed Chief of Police a few days before the arrival of the President in Constantinople, he may have considered it necessary to nip in the bud an imaginary attempt on the President's life in order to demonstrate his efficiency.

Such plots are, however, bad propaganda—both in Turkey and abroad—for the much advertised popularity of the Government that exists in the Turkish Republic.

The railway systems.

Before the Great War railway construction in Turkey had been largely due to foreign initiative, with the result that the railways were designed rather to benefit the exploiting companies than to develop Turkey. The three earlier railways—the “Anatolian,” the “Smyrna Cassaba,” and the “Aidin” were for many years not even connected

together although their termini were adjacent to each other. The Orient Railway was an exception to the above in that it was designed as a strategic railway during the Russo-Turkish war. It was not completed in time and soon passed into foreign hands for exploitation.

The Baghdad Railway, although intended by the promoters to strengthen Germany's position in the Middle East by giving her a land route to the Persian Gulf, has been of considerable strategic advantage to Turkey particularly since the railways in Western Turkey have been connected up.

Russian influence had however during the pre-war period prevented the construction of any railway in Central and North-Eastern Anatolia, which would have been of great strategic importance to Turkey during the Great War.

Though some of the schemes that have recently been decided upon or considered by the Turkish Government for the development of the railway system are not original, the initiative has come from within Turkey rather than without. This is the great difference between pre and post-war railway development in Turkey. The present Turkish Government is formed largely of soldiers, and the strategic value of every line proposed has been carefully considered before assent has been given by the Government to its construction. The greatest activity is at present centred in the area that had before been under the Russian ban.

The Turkish Government have recently completed the construction of the Angora-Kaisarya Railway, and have built a short section of railway from Samsun to Sivas. These two railways form part of a plan for linking up the Eastern Vilayets with the rest of the country. Owing to the slowness of construction financed by Turkish capital only, the Government has given a contract to a Belgian firm for the completion of the Samsun-Sivas Railway, and for the railway between Sivas and Kaisarya. The contract for the railway between Kaisarya and Ulukishla (on the Baghdad Railway) has been given to the German firm of Julius Berger. The Angora-Kaisarya route had been considered before the construction of the Baghdad Railway by the Anatolian Railway Company, as an extension of their railway in a south-easterly direction, but Russian pressure had negatived the project.

The Government are also negotiating with a Swiss group (M. Felix Picus, backed by American capital) for the construction of a railway from Sivas to Erzingan. The extension of this railway to connect up with the Erzerum-Kars Railway and the construction of the Trebizond-Erzerum-Tabriz Railway are projects which are unlikely to be taken up by the Government for some time.

This group of railways in Eastern Anatolia is of great strategic importance as it will, if completed, form the main strategic lines for the defence of the Eastern Frontier and may eventually replace the Baghdad Railway as the main overland route to the East. From an administrative and economic point of view it will be equally valuable. Kaisarya, which in Roman times was of great commercial importance, will develop again when the old Roman trade routes have been re-opened by railways.

Various schemes have been considered since the war for the development of railways in the south-eastern area. The main difficulty has been to discover a route through the mountainous districts that would at the same time secure communication between the more important centres and could yet be constructed at a reasonable cost. The present plan is to run a branch line from the Baghdad Railway at Keller to Diabekr, passing through Malatia, Kharput, and Arghana (important on account of the copper mines). A contract has been signed with a Swedish group for the construction of this railway. From a strategic point of view this trace is somewhat unsatisfactory as the weak spot in the Baghdad Railway has to be employed to connect Diabekr with the rest of Anatolia, for Cilicia must always be a danger point to the Turks in time of war. This seems to be unavoidable owing to the prohibitive cost of any other trace.

A third project of the Turkish Government is to connect the Zonguldak coal fields by rail with the rest of Anatolia. The Government have decided to build a Railway from Eregli on the Black Sea coast to a point on the Angora-Kaisarya Railway near the new arsenal at Yagtche Han. An agreement was recently signed with a Swedish group for the construction of this line on a metre gauge, but it is now reported in the press that negotiations are proceeding for a broad-gauge railway. The advantages of a broad-gauge line are obvious, as it would place the coal mines in direct touch with all

the railways in Anatolia without the delay and difficulties caused by a change of gauge, but the railway has to traverse the mountainous zone between the central plateau and the Black Sea, and a narrow gauge line would be very much cheaper, estimated at about half the cost.

A fourth project which is still somewhat nebulous is a railway from Adabazar on the Anatolian Railway to Havza on the Samsun Sivas Railway *viâ* Kastamuni, with a branch to Ineboli. The strategic value of this line is limited, but it would undoubtedly strengthen the defences of this coast line. Its commercial value is also dubious as it runs parallel to the coast line which is at present well served by shipping services.

A fifth project is the construction of a line from Kutahia, on the Anatolian Railway *viâ* Tavchanli to Balikesri, on the Smyrna-Panderma Railway. The contract for the construction of this railway has been given to the German Group of Herr Julius Berger. If the Smyrna-Panderma Railway is connected up to the Anatolian Railway in this way it will be a matter of considerable strategic importance as the Smyrna area, like Cilicia, is at present a bottle-neck of Turkish railway communications in the west, and the new line will enable the Turkish Government to reinforce the Dardanelles zone without passing near Smyrna. The Tavshanli-Kutahia section is destined to assist in the development of certain mines in the Tavshanli district.

A sixth project is the construction of a branch of the Aidin Railway from Dineir to Chai (on the Anatolian Railway east of Afium Kara Hissar) and a branch from Egerdir to Adalia on the Mediterranean. The Turkish Government have already pressed the Aidin Railway Company to build these two extensions, but the railway company have replied that neither would be remunerative, but that they might be prepared to undertake the Dineir-Chai extension with a suitable kilometric guarantee. To this the Government are most unlikely to agree. The importance which the Turks place upon this railway is probably due to the reports that they have received of possible Italian aggression against them at this point, otherwise the railway appears to present little strategic advantage to the Turks.

So much for new construction. The Turkish Government at present directly control and operate the "Anatolian" and the

"Baghdad" Railway system except for the portion of the latter which runs through Syria which is operated by a French Company. The Government also own and operate the recently constructed Angora-Kaisarya Railway. The Smyrna-Cassaba Railway (which includes branches to Afium Kara Hissar and to Panderma), is operated by a French Company. The Smyrna-Aidin Railway is owned and operated by an English Company. The Turkish Government could, and certainly would, take these two latter railways over on mobilization. The Smyrna-Cassaba Railway, although for some years not connected to the Anatolian Railway, was linked up shortly before the war, and during the war the separate Smyrna-Cassaba and Smyrna-Aidin Railways were linked together in Smyrna, therefore the rolling-stock on the whole railway system in Anatolia is at the disposal of the General Staff in case of national emergency.

That the Turks are capable of exploiting a railway is shown by their handling of the Anatolian and Baghdad railways ; operating times have been speeded up and a great deal of money and energy has been spent on improving the permanent way, bridges, &c., but the difficult nature of the country other than on the central plateau makes comparison with other countries somewhat invidious.

UNITED STATES.

The Military Academy at West Point.

1. *Purposes of the Academy and type of officer required.*

The purposes of the Academy as defined by the Superintendent (corresponding to our commandant) "is to give all cadets a broad general conception of all branches of the service. This training is elementary, fundamental and general (note the powerful adjectives). The tactical work is not intended to produce either a drill sergeant or a subaltern qualified for one particular branch."

Quoting again from the Superintendent the type aimed at is as follows:—

Changed conditions since the war require modification of the type of officer. He will require all the cardinal military virtues as of yore, but in addition must possess an intimate understanding of human feelings and a grasp of world and national affairs.

The fact that the American officer in war as well as in peace is largely required as an instructor for civilian or semi-military organizations is fully recognised and is stressed throughout the course.

The influence of the Great War and of local conditions will be noticed in this description of the ideals aimed at and the purpose, though described in somewhat large sounding terms may be accepted as sound.

2. The nature of the course.

In order to achieve these purposes a course of 4 years is planned, for the first 18 months of which the cadet has practically no leave, while throughout the course the holidays are few and the hours are long. The course still retains a large proportion of the engineering subjects from the days when it was primarily an engineering college, and in this respect is designed to cover the same ground as the first 3 years of a university engineering course.

3. Syllabus of instruction.

The subjects to be taught, proportion of hours allotted to them and the methods of instruction are the subject of much thought and constant discussion.

At intervals of 5 years an influential committee is formed to investigate very thoroughly the whole system of West Point and to introduce changes where necessary. In a similar manner the co-ordination of the various subjects which are inter-related is very carefully arranged for. It is interesting to note that during the last 10 years the amount of time devoted to cultural subjects such as Government, European History, Economics and Languages has been increased by 100 per cent.

4. Staff.

With the financial resources that are available it has been possible to provide West Point with an extremely large staff. There are no less than 200 military and civilian instructors for an establishment of 1,300 cadets. The average size of a class seldom exceeds 15 with the excellent result that a great deal of individual attention can be given to cadets.

The selection and training of instructors, both as regards the subject they are to teach and in educational psychology, still leaves

much to be desired. Officers are apt to be selected as instructors purely on their former record at West Point without much regard to the qualifications essential for such posts.

5. *The cadets and their selection.*

Cadets usually enter the Academy between the ages of 19 and 21. The size of entry varies from 200 to 250. West Point is fortunate in being able to have a very large field of selection, and there is great competition to be admitted to the Cadet College. There are two reasons for this: First, the West Point graduates have an excellent reputation with regard to their knowledge, character and ability in the outside world and those who leave after their 4 years of obligatory service as an officer are sure to be employed. Secondly, parents are anxious to avail themselves of the thorough education and strict discipline for their sons.

Differences in the social prestige attached to various occupations are not so marked in U. S. A. as they are in England, but, taking this into account, the social status of the Army officer is not so marked as it is here. The Army is not a money-making profession, and it is West Point itself rather than the subsequent military career which is the attraction to parents.

The vacancies for West Point are distributed throughout the various States of the country with the exception of a few nominations reserved for the President.

Of any batch entering the Academy, only 50 per cent. have passed an entrance examination, with the result that, amongst the remainder, there is a very high percentage of failure. In the former days some 40 per cent. of cadets failed to complete the 4 years' course. It is hoped now to reduce this percentage to about 25.

Cadets join from all States and are very varied in their manners and social status. Parents include chiropractors, cooks, capitalists, icemen and detectives, &c. A "powerful machinery" exists for converting this strange collection of human beings into a smart body of cadets in a very short while. Within 24 hours they have been barbered, photographed, given a book of customs and a first suit of uniform.

The book of customs, known as the Plebes Bible, contains, amongst other peculiar items, instructions with regard to "Appearance-

and Carriage," the mass production of standardised cheering during athletics and a piece of poetry entitled "My Mother's Words."

The cadets themselves are extremely smart in their movements beautifully turned out in the old blue-grey uniform, very well mannered, neither shy nor over-bearing and willing to talk fairly intelligently on a great number of subjects.

6. *The buildings, &c.*

West Point is beautifully situated, and although it is little more than 100 years old, it has much of the atmosphere of an old English university, not only in the style of the buildings, the trees and the well-kept lawns, but also in the spirit of the place which lays such constant stress on its history and traditions.

The buildings of West Point are on the most lavish scale. The laboratory and class rooms are very well fitted, and they own what must be the biggest riding school in the world, where in-door polo is played by many of the cadets during the winter months.

7. *Life at West Point.*

There is a very strict code of honour in the Academy. In fact, it is somewhat too rigid and rather recalls in some ways the pre-war German universities where courts of honour sat to decide on nice points of conduct and procedure. At the same time, it has its good side and the cadets are trained never to evade the truth or to dishonour the Academy, and offences against the code of gentlemanly conduct are rare.

The contact between officers and cadets is not sufficient. There are no platoon commanders in constant personal and friendly relations with the cadets as is the case in our own cadet colleges, but only one company commander for 200 cadets, and even he has little contact except in the orderly room.

No visitor should miss the Church Service which plays an important part in the life of a cadet. It is a ceremony popular with parents and relations. The Service is opened by the choir of cadets, 100 strong, marching in fours up the centre of the church wearing their old-fashioned full-dress uniform of blue-grey and gold, and singing the West Point Hymn. The Service is short—since the religious side is subservient to the idea of making a good American and a good "West Pointer."

Leisure is extremely lacking and the system of discipline is complicated and mechanical. A code which lays down a number of minor offences with the precise demerits allotted to each is rigidly adhered to, with the result that many cadets spend most of their time endeavouring to avoid demerits, whether for their work or for conduct.

Athletics, which include wrestling, golf and a very excellent indoor game, basket ball, are taken very seriously. There are many instructors, much apparatus and a permanent masseur. Every cadet is bound to take up a number of games, including golf and tennis, before he is allowed to specialise in any one. When he has reached this stage he goes in for intensive training, which includes separate diet at a separate table.

8. *The instruction.*

A most interesting feature of the course is the attention now paid to cultural subjects. These include European history, English literature, the modern drama, and an "Introduction to Contemporary Civilization." This latter course is intended to give a brief summary of the important political, national and economic problems of the world. It includes a very brief history of the development of society, the culture of various nations—the arts, thoughts and knowledge of to-day. In addition, the daily reading of certain sections of the New York "Times" is made obligatory.

9. *Methods of instruction.*

With regard to educational method the work at West Point is in accordance with the best modern ideas, but it is apt, in practice, to be too mechanical. Classes are small; every cadet is called upon to speak on the subject of his work at least two or three times a week. Classes are graded according to the intellectual and educational attainments of the various cadets. Moreover, they are required to do considerable reading, and in general two hours of private study are allotted to every hour of lecture.

The system is such that no cadet can be idle since he is required to speak or write throughout the course on what he has learnt.

On the other hand, the hours are very long and instructors are apt to pay attention not to the teaching nor to illuminating the subject and interesting the cadet but merely to marking them for their work, while the cadets themselves are apt to stick too closely to the precise outline laid down without much thought round and about the subject and to concentrate on avoiding demerits. A good feature of the course is that an opportunity is given to all cadets towards the end of their time to offer serious criticisms on the subjects and methods of instruction.

10. *Changes in the future.*

Important changes which are foreshadowed in the future are as follows :—

- (i) Greater care in the selection and especially in the training of instructors.
- (ii) The daily life and system of teaching to be made more human.
- (iii) More attention to be paid to general basic education which is designed “to equip a cadet for citizenship and to stimulate his interest in intellectual pursuits.”
- (iv) The introduction of psychology into the syllabus.
- (v) An increase of time for private study.
- (vi) An increase of time allotted to “Contemporary Civilization.”

CORRESPONDENCE.
FIELD DISTEMPER FUND.

DEAR SIR,

I have already addressed a direct appeal to the Commanding Officer of each regiment appearing in the Indian Army List, and, with it the enclosed leaflet reprinted from an article which appeared in the *Field* of the 13th instant.

Would you be so kind as to help the Field Distemper Council to follow this up by reprinting the article and commending it to the notice of your readers—particularly to British Officers stationed in India?

The support of the Press in India has been of inestimable value to the Fund, and it is largely owing to their advocacy that we have been able to finance the work of the Distemper Research Committee.

That work has progressed so hopefully that the investigators are now definitely encouraged to believe that the discovery of a remedy for the prevention and cure of distemper is now certain.

Yours faithfully,
G. W. MOSS BLUNDELL,
ORGANISING SECRETARY,
The "Field" Distemper Fund,
WINDSOR HOUSE,
Bream's Buildings,
LONDON, E. C. 4.

THE "FIELD" DISTEMPER FUND.

British Officers are keen sportsmen, wherever they may be found, and none more so than those stationed in India, for there is enough sport of one kind and another to suit them all in our vast Empire overseas. Most of them will have heard something of our efforts to find a cure for distemper and many, no doubt, will wish to know more. The labours of the Distemper Research Committee, whose work is financed by our Fund and has been rendered practicable solely in this way, are nearing an end. The Committee, after four years' work, are now definitely within sight of success. As the result of experimentation at the Research Station at Mill Hill, hounds, dogs and

ferrets have already been rendered immune against distemper. Full details of the scientific part of the work will be published before long. In the meantime, we may tell our readers that all that remains now to be done is to produce a reliable vaccine which can be made available for general use, as has been done already in the case of small-pox, typhoid fever, malaria and certain other diseases. In our original appeal to the public for help to finance this work it was stated that £25,000 would be needed. Only £3,800 is now required to complete it.

We have received very many generous subscriptions from all parts of India, many of them due to the co-operation of the Press, the Kennel Club of India, and the Royal Army Veterinary Corps in making known our work, its development and progress, and its claims on public support. We are no less grateful for these services than for the financial help of those who responded to the appeals.

Several regiments in India have supported our Fund already and it is certain that many more would have done so had we been able to get personally in touch with them. As they have not, however, supported the Fund in proportion to their numbers, we feel that the position will be very materially altered if we appeal to them now to help us to get the £3,800 wanted to complete our Fund. There can be no question that every officer, and, therefore, every sportsman would wish to be associated with this work whilst there is yet time, as, when finished and the final discovery made, every dog owner who has not contributed will be able to share the benefit equally with those who have subscribed.

Such being the case, we know we shall not appeal in vain to British Officers of all regiments now in India to send the hat round the Mess for the Fund.

SIR,

With reference to the article "Letter of a R. T. O. Officer to his Brother" published in the October number of the Journal I regret two errors are brought to light by the recent publication of the new Tank and Armoured Car Training, Vol. 2.

(1) *Organization of a Tank Battalion*.—A new War Establishment of a Tank Battalion has apparently been decided upon.

The battalion is to consist of:—3 companies of 15 tanks plus 1 company commander's tank per company; each company is to be

organized into 3 sections of 5 tanks (1 tank in each section being the section commander's tank; and the R-T tanks are reduced to 4 per battalion. See Tank Training, Vol. 2, 1927, page 11.

(2) *System of Repairs.*—Salvage Companies are retained as a connecting link between fighting units and the R. A. O. C. repair units. See Tank Training, pages 12 and 13.

Yours faithfully,

J. T. CROCKER, LIEUT. (R. T. C.)

REVIEWS.

OFFICIAL HISTORY OF THE WAR-MILITARY OPERATIONS,
FRANCE AND BELGIUM, VOL. III.

COMPILED BY BRIGADIER-GENERAL J. E. EDMONDS, C.B., C.M.G.,
R.E., AND CAPTAIN G. C. WYNNE.

(Messrs. MacMillan & Co., Ltd., London, 1927) 12s. 6d.

This volume of the history of the Great War, based on official documents and publications, contains an account of the winter of 1914-15 in France, and is chiefly made up of detailed and interesting accounts of the battles of Neuve Chapelle and second Ypres.

It is the period of the fighting in France which will chiefly interest the Indian Army, as the Indian Corps played an important part in both of the two chief engagements recorded.

1915 was rather a weary and depressing year, from the point of view of the British Army in France, as we were committed to what looked like an indefinite period of trench warfare, for which, the Germans were considerably better equipped than we were, in almost every particular.

The battle of Neuve Chapelle was the first attempt to break through a trench warfare system of defences, and the methods adopted in this battle by the 1st Army, served as a basis for all subsequent operations of this sort up till almost the end of the war, when tanks came into the picture. The attack, supported by a weight of artillery, until then unprecedented, was a complete success in certain places but broke down badly wherever barbed wire and machine guns had not been destroyed. Had we only pushed through the gaps and left the places where the attack had been held up alone, instead of waiting until progress had been made there also, the operation might have been even more successful.

The author brings to light a little known fact, in his account of the second battle of Ypres, when he shows that both the French and Belgians had received reliable information that the Germans were going to use gas a week before the attack actually took place. This information was passed on to the British Second Army but little credence could have been placed in it, as the attack came as a complete

surprise, and we were only lucky in that, the extent of its effect, both moral and material, had not been estimated by the Germans themselves, with the result that they had made no preparations for an offensive on a large scale at Ypres.

The author has had a number of regimental and private diaries placed at his disposal for the compilation of this volume, in addition to official documents, and the result is a very complete and detailed account of these operations adequately illustrated by a number of carefully prepared sketches and maps.

THE WORK OF THE ROYAL ENGINEERS IN THE EUROPEAN WAR 1914-1918.

Miscellaneous.

COMPILED BY COL. G. H. ADDISON, C.M.G., D.S.O., AND PUBLISHED
BY THE SECRETARY, INSTITUTION OF ROYAL ENGINEERS, CHATHAM.

This Volume (Miscellaneous) is the last of the series under the general title given above. It includes the following sections:—

- I. Organisation and Expansion of the Corps 1914-18.
- II. Organisation of Engineer Intelligence and Information.
- III. Camouflage Service.
- IV. Concrete Defence Works and Factories.
- V. Forward Communications.
- VI. Machinery, Workshops and Electricity.
- VII. Anti-Aircraft Searchlights.
- VIII. Inundations.
- IX. Schools.

The book is naturally of interest to the Sapper rather than to the general reader. A glance through it, however, gives a valuable impression to the latter of the immense amount of engineer work and the variety of engineer units required by a large modern army.

At the outbreak of war there were about 23 different types of units in the R. E. and the strength was some 1,000 officers and 10,000 men (Reg. & S. R.) and about 500 officers and 13,000 men (Territorial Force).

At the close of the war there were over 150 different types of units (including Signals and Transportation); among them were such items as "Train Ferry Companies," "Quarry Companies," "Water boring Companies," "Z" Special Company (Chemists)," "Forestry Companies," "Cinema Company," etc.

The total strength was about 12,000 officers and 225,000 other ranks (excluding about 110,000 all ranks in Transportation).

The section on Camouflage is of more general interest than the remainder of the book and excellent diagrams and drawings are included.

The value to the Corps of R. E. of the record contained in this and the remaining volumes needs no stressing and the Institution of Royal Engineers are to be congratulated on taking over their publication when official help was refused.

Great credit is also due to Colonel Addison for the clear records he has extracted, in very limited time, from the mass of material which must have been available in the various theatres of war.

TIBET, PAST AND PRESENT.

BY SIR CHARLES BELL, K.C.I.E., O.M.G.

Oxford University Press (cheap edition), 10s., 1927.

Sir Charles Bell's book first published in 1924, is recognised as the standard work on this little-known country.

The author held the post of Political Officer in Sikkim (to which post belong also the diplomatic relations of India with Tibet and Nepal) during the period that the Dalai Lama was residing at Darjeeling, and in 1920-21, he spent nearly a year in Lhasa, so that he has had unrivalled opportunities of studying his subject.

His first chapters deal with the history and geography, etc., of Tibet, but, interesting as these are, the chief interest of the book lies in the author's views on the political relations of Tibet with India, China and the smaller States which border on Tibet, Nepal, Sikkim and Bhutan.

The importance of Tibet to India is that it acts as a buffer state on our northern frontier. "The great desolate area of the Chang Tang or Northern Plains forms a barrier equal, or superior, to anything that the world can show elsewhere." And this barrier is strengthened by the fact that Tibet wants to be left alone to manage her own affairs without foreign interference from any quarter. At the same time, she wants to be safe from external aggression. While some Tibetans feel that this could be best assured by Tibet's becoming a British Protectorate, there are others who look to China. Tibet has a strong natural connection, in many ways, with China, while with India she has really none. But China has in the past occupied Tibet and the Chinese occupation has left an unpleasant taste.

Indeed, China still claims Tibet as part of her dominions, a claim which Tibet denies, in her turn claiming as Tibetan territory the area usually shown on maps as the south-western corner of the Szechwan province of China. In actual fact, Tibet is now entirely independent of China and although, as the author says "Tibet's natural affinity is no doubt with the races of the Chinese Commonwealth," "this bond with China . . . is not likely to be one of Chinese domination."

An interesting suggestion made by the author is that "later on it may be found desirable to recruit Tibetan soldiers for the Indian Army on somewhat the same lines as Gurkhas are now recruited." Some Tibetans have actually enlisted, under Nepalese names, in Gurkha regiments, but it seems doubtful whether the tenets of Buddhism conduce to the forming of a fighting race.

Of Tibet's attitude towards India, Sir Charles writes:—

"The present attitude of Tibet, unlike that of Afghanistan, is one of cordial friendship with Britain. But the effect of Home Rule in India, if this should entail the decrease of military power there, and the substitution of Indian for British control of frontier affairs, would tend to turn her away."

Well written, clearly printed, illustrated with many excellent photographs and, last but not least, provided with a map which can be read alongside the text, Sir Charles Bell's book should be read by all who are interested in the history of India.

THE CHINESE ARMY AS A MILITARY FORCE.

BY LAURENCE IMPEY.

(Tientsin Press, Tientsin, China, 1926. 12s. 6d.)

The title of this book is rather misleading to Westerners, as there is no "Chinese Army", in the western sense. Each leader and faction has his or its own army and these differ so much from one another in military efficiency that any attempt to judge them as a whole is liable to lead to false conclusions.

The writer states that "an estimate (of the military value of the forces in China) can best be derived from a consideration of the civil war of 1924", but during the three years which have since elapsed, conditions have altered considerably. For instance, Feng Yu-hsiang's troops were considered the best in 1924 but their military value is believed now to be small.

One is inclined to agree with the author's conclusion that "the outstanding fact is the lack of efficient direction, for the soldier himself shows signs of being first class material if well handled." To this however should be added that, generally speaking, armies in China at the present day are the hirelings of some individual leader, to whom and to whom only, they are loyal—there is a complete absence of any national feeling and morale suffers accordingly.

WHERE CAVALRY STANDS TO-DAY.

BY LT.-COLONEL H. V. S. CHARRINGTON, M. C.

(Messrs. Hugh Rees, Ltd., London, 1927.)

This excellent little book of only 63 pages gives a very clear and concise picture of the rôle of cavalry in the past, and of its use, and misuse, during the Great War.

The author draws very sound conclusions as to our probable requirements in cavalry for the future.

He maintains that the British Army will need cavalry for many years to come, especially in view of the very varied types of terrain in which we may have to operate in defence of the Empire. By all means let us proceed with mechanisation but the armoured fighting vehicle is still far from being able to replace the cavalry man entirely, although the day should not be far distant when it will be able to replace entirely the transport animal.

We agree with the author that the day of the cavalry mass has gone and a cavalry brigade is probably as large a formation as can be usefully employed. Nearly all our post war manoeuvres have pointed to the necessity, which Colonel Charrington stresses, of some cavalry being made part of the divisional organisation, and the general opinion is that nothing less than one regiment will be really sufficient.

GREAT CAPTAINS UNVEILED.

By B. H. LIDDELL HART.

(*William Blackwood and Sons, Edinburgh and London, 1927*). 12s. 6d.

The author quotes very aptly a favourite anecdote of Marshal Foch which is said to have originated from Verdy du Vernois at the battle of Nachod. "To the devil with history and principles : after all, what is the problem ?"

Military history may be studied by the soldier with two different objects—firstly, to store up in the mind a number of mental pictures of historical episodes which may be called upon at will and applied to similar cases, and secondly, to study the application of the principles of war to past problems of military history, so that one may be able to provide the correct solution to the problem in hand instinctively. The second method is undoubtedly the sounder for, although for training purposes it is often interesting to apply a historical solution to a modern problem, it is so seldom that ground and conditions are anything like identical, that the application of the first method may lead to rigidity and perhaps disaster.

It is, however, rather a debatable point as to how far back into history one can look with advantage. We are perhaps a little inclined to eulogise the giants of old and belittle the commanders of our own time and it is rather doubtful whether it is of any real instructive advantage to unveil such ancients as Jenghiz Khan and Sabutai or whether their tactics and marches will really teach us very much.

We are told that one of Sabutai's advanced guards (not just an independent cavalry detachment) "in 3 days covered 180 miles through a hostile country deep in snow" ! !

The best infantry in the world to-day would hardly do half this distance on the hard high road with no opposition and the reader therefore cannot help being a little doubtful as to the accuracy of the statement.

The most interesting part of the book is that dealing with General Wolfe, about whose early training and private life little is generally known. The lighter side of some of the Great Captains described in the book is of interest—Gustavus Adolphus, who was very much opposed to duelling among his officers, on one occasion yielded to the entreaties of two of his officers and granted special permission for them to meet, and added that he would attend himself. On arrival, he said to the duellists! “Now, gentlemen, at it and stop you not till one is killed. Moreover, I have the provost-marshal with me, who will at once execute the other”!

Captain Liddell Hart has collected some interesting facts concerning five of the great leaders of the past but, as an addition to the latest military writing, it is disappointing and cannot be classed in the same category as that other excellent book by the same author “The Remaking of Modern Armies.”

The Fighting Forces, October 1927.

Rapid mechanisation is advocated more strongly in this magazine than any other and the Editor has coined a new word “To Cenotaph,” the meaning of which is to fight a battle in which you must die. A “Cenotaphic” exercise is one entailing the idea of maximum slaughter.

It is maintained that this is now a common expression of the British soldier to signify their boredom with any exercises or manœuvres in which infantry are ordered to attack without the support of tanks or a very heavy weight of artillery support.

So far as we are aware this expression has not penetrated as far as India—it would hardly appear to be a suitable one for the British soldier, or one which is likely to gain any degree of popularity.

There is an excellent article in this number entitled “The Reign of the Bullet” showing most clearly how the bullet came to dominate the battlefield and how it has now met its master in the armoured fighting vehicle. The article ends up as follows: “Yet the whole power of half an ounce of lead depends on one thing only, namely, the penetrability of human flesh. Half an inch of steel can remedy this natural defect, and when this is realised, and more than realised—accepted—the reign of the bullet will come to an end and the art of war will have completed yet another lap in its tortuous and interminable course.”

In reviewing Captain Liddell Harts much read and much discussed book "The Remaking of Modern Armies," opportunity is taken to discourse on Military Criticism and Military Critics generally.

The view is taken that criticism on military matters does not carry a great deal of weight because the authors are not soldiers and cannot therefore have experience, nor accurate, or detailed information, of their subject. Certainly if military officers were allowed to write books—as some of them manage to do—their recommendations and deductions would carry more weight but it is inconceivable that this could be allowed for disciplinary reasons and the public must therefore depend on the writings of non-military authors. Of these it would be difficult to find a better than Captain Liddell Hart or a better book than "The Remaking of Modern Armies."

The Journal of the Royal Artillery, July 1927.

The July number contains several good articles, the most interesting of which are "The Role of the Fortress in Modern War," a lecture delivered by Major-General Sir Edmond Ironside, "The Maintenance of our Fighting Forces in the Field," a lecture delivered by Bt. Lieut.-Colonel W. G. Lindsell and an article by Colonel F. Rainsford-Hanny on "Finesse at the O. P."

General Ironside considers that fortresses can still play an important part in warfare, provided that they are used as pivots for a field army and not left isolated. He instances the failure of Liège in the Great War, and the important parts played by Verdun and Metz. "Verdun never fell, not because of its own strength, but because of the troops which used it as a pivot."

Colonel Rainsford-Hanny's article points out the need for greater finesse in artillery shooting, if the most is to be made of really good artillery targets, which only occur seldom and are such as every gunner dreams of. He instances a column of infantry on a road. Every gun within range usually opens on the head of the column, which is immediately obliterated from view by clouds of smoke and dust, behind which, the surprised troops can shake out and get under cover. If the guns opened on the rear of the column and worked forward, much better visibility would be obtained, and far heavier casualties would be inflicted.

The Journal finishes with an article on "Chasing" by "Ambush" illustrated by some excellent photographs.

The opening article, "The Duncan" silver medal essay, deals with the re-organisation of the divisional artillery. The author, rather surprisingly, advocates cutting down the already very small allotment of guns with the division to improve transport and communications. Admittedly the latter are both of vital importance but, in order to improve them without incurring any extra cost, it would appear preferable to even cut down an infantry battalion per brigade rather than reduce a single gun.

After all, of what use are infantry if they are without sufficient artillery support to get them forward?

As regards anti-tank defence, the author takes a rather ultra "gunner" point of view. He says, "It is neither possible nor necessary to protect the foremost troops against tanks. The danger in a tank attack lies either in the fact that it is accompanied by an infantry attack or in the fact that, if tanks can penetrate the forward zone, they may create havoc among the headquarters, transport columns, billets, etc., in rear."

It is cold comfort to the infantry, who have been overrun by tanks to know that the gunners will guarantee to knock them out before they get to Divisional headquarters. The infantry must be closely supported by an anti-tank weapon, whether part of their establishment or not, or no infantry in the world will carry on if continually threatened with tank attacks.

The JOURNAL of the UNITED SERVICE Institution of India

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Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Sergeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 10.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution, on or after the 1st October, will not be charged subscription until the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

*Rs. 7 in the case of British Service Officers serving in India.

Contributions to the Journal.

All papers must be typewritten (in duplicate) and only on one side of the paper. All proper names, countries, towns, rivers, etc., must be in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., para. 204, and King's Regulations, para. 509.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published. Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

United Service Institution of India,

APRIL, 1928.

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I.—New Members.

The following new members joined the Institution from 1st December 1927 to 29th February 1928 :—

ORDINARY MEMBERS.

Lieut. A. M. Finlaison.	Captain R. J. Tuke.
Wing Commander J. O. Archer.	Captain W. H. C. Rainier.
Captain H. N. Obbard.	Captain A. E. Warhurst.
2/Lieut. R. B. F. K. Goldsmith.	Captain J. N. Soden.
Major W. L. B. Chapman.	Lieut. A. E. Saalfeld.
Captain G. B. J. Kellié.	Captain R. M. Gore.
Lieut. A. C. Cottell.	Captain J. V. Bell.

II.—Examinations.

(a) The following table shows the campaigns on which the military history papers will be set from March, 1928, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii) :—

1	2	3	4	5
Serial No.	Date of examination.	Campaign set for the first time.	Campaign set for the second time.	Campaign set for the last time.
1	March, 1928 ..	Waterloo. 1815 (from the landing of Napoleon in France, 1st March, to the conclusion of operations at Waterloo).	..	Mesopotamia, 1916-17 (as detailed in Army Order 339 of 1925, as amended by Army Order 168 of 1926).
2	October, 1928 ..	Palestine, 1917-18 (from Genl. Allenby's assumption of command, 28th June, 1917, to the conclusion of operations, 31st October, 1918), covered by despatches, dated 16th December, 1917, 18th September and 31st October, 1918, and 28th June, 1919.	Waterloo, 1815 (as given in Serial 1, column 3)	..
3	March, 1929 ..	..	Palestine, 1917-18 (as given in serial 2, column 3).	Waterloo, 1815 (as given in serial 1, column 3).
4	October, 1929 ..	To be notified later.	..	Palestine, 1917-18 (as given in serial 2, column 3).

NOTE.—With regard to Army Order 363 of 1926, the above campaigns will not be divided into general and special periods.

(b) Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1. *The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2. *The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. C. G. Powels).

B.—OTHER BOOKS.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The Revolt in the Desert (T. E. Lawrence).

Allenby's Final Triumph (W. T. Massey).

How Jerusalem was Won (W. T. Massey).

Outline of the Egyptian and Palestine Campaigns, 1914-18
(Bowman-Manifold).

L'Attaque du Canal de Suez (Douin).

Army Quarterly—October 1920 (T. E. Lawrence's article).

Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T. Atkinson's articles).

Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's article).

Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).

R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's article).

U. S. I. Journal—October 1923 (Captain Channer's article).

3.—The Dardanelles Campaign.*Description.*

Naval and Military Despatches ..	A clear account of the operations in detail from the G. H. Q. standpoint.
Reports of the Dardanelles Commission.	Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts.
The Dardanelles (Callwell) ..	The best account and criticism of the strategic conduct of the campaign.
Gallipoli Diary (Sir I. Hamilton) ..	The campaign from the point of view of the C.-in-C. on the spot.
Life of Lord Kitchener (Arthur) ..	Throws considerable light on Lord Kitchener's direction of the campaign.
The Dardanelles Campaign } (Nevinson). Gallipoli (Masefield) The World Crisis (Winston Churchill.)	Well written and picturesque accounts by eye-witnesses. Explains his part in inception of the campaign.

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson). C. I. G. S.
Five years in Turkey (Liman Van Sanders).
Official Account: Official History of the War, Naval Operations, Vols. II and III.
Gallipoli Campaign (Outline of Military Operations). By a Student.
Experiences of a Dugout (Callwell).
Despatches from the Dardanelles (Ian Hamilton).
The Navy in the Dardanelles Campaign (Wemyss).

4.—*The Mesopotamia Campaign.*

- The Campaign in Mesopotamia, 1914-18 (Evans).
Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).
Critical Study of the Campaign in Mesopotamia up to April, 1917.
Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
The World Crisis (Winston Churchill).
Notes and Lectures on the Campaign in Mesopotamia (A Kearsey).

5.—*Waterloo Campaign.*

- Waterloo Campaign (J. H. Anderson).
Waterloo (Hilaire Belloc).
Wellington and Waterloo (Arthur Griffiths).
Waterloo the Downfall of the first Napoleon (George Hooper).
Campaign of 1815 (W. H. James).
With Napoleon at Waterloo (E. B. Low).
Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).
Waterloo Campaign (S. C. Pratt).
Wellington and Waterloo (G. W. Redway).
Wellington Campaigns. Peninsula-Waterloo, 1808-1815, also Moore's.
Campaign of Corunna (C. W. Robinson).

6.—*The American Civil War.*

Stonewall Jackson and the American Civil War (G. F. R. Henderson).

History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).

History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).

American Civil War (J. H. Anderson).

The 1st American Civil War, 1775-78 (Henry Belcher).

The American Civil War, 1861-64 (John Formby).

History of the American Civil War (J. W. Draper).

Fredericksburg and Chancellorsville (J. E. Gough).

Battles and Leaders of the Civil War (Johnson and Buel).

War of Secession, 1861-62 (G. W. Redway).

7.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

8.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

A Staff Officer's Scrapbook (Ian Hamilton).

German Official Account.

Lectures on the Strategy of the Russo-Japanese War (Bird).

Question on the Russo-Japanese War (Brunker).

Official Account: The Russo-Japanese War (Naval and Military),
3 Vols., published by Committee of Imperial Defence.

Outline of the Russo-Japanese War (Ross).

A Study of the Russo-Japanese War (Chasseur).

My Experiences at Nan Shan and Port Arthur (Tretyakow).

Outline History of the Russo-Japanese War, 1904, up to the
Battle of Liao-Yang, with Questions and Answers (P. W.).

A short account of the Russo-Japanese War ("Footslogger").

An account of the Battle of Liao-Yang (with questions and 10
maps for examination purposes) (Bird).

9.—*The Palestine Campaign.*

The Official History of the Great War—Military Operations in
Egypt and Palestine, Vol. I, and Maps (Lt.-General Sir
George MacMunn and Captain Cyril Falls).

The Palestine Campaign (Colonel A. P. Wavell).

An Outline of the Egyptian and Palestine Campaigns, 1914-18
(Major-General Sir M. G. E. Bowman-Manifold).

Official History of Australia in the War, 1914-18, Vol. VII, Sinai
and Palestine (H. S. Gullett).

The Desert Campaign (W. T. Massey).

10.—*Organization of Army since 1863.*

A.—ORGANIZATION OF ARMY SINCE 1863.

History of British Army, by Fortescue, Vols. I to XI.

Outline of the Development of British Army, by Major-Genl. Sir W. H. Anderson.

Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

* Notes on the land forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1925.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines, viz., R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc.

10.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas, 1917).

The British Empire Series. (XII volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

* Particularly recommended by the C. I. G. S. for all officers to read.

Forty-one years in India (Lord Roberts).

History of the British Army (Sir John Fortescue).

General Survey of the History of India. (Sir Burney Lovett).

Citizenship in India (Capt. P. S. Cannon).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominions in India (Sir A. O. Lyall, 1894).

A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).

The Nearer East (Hogarth, 1902).

Modern Egypt (Cromer, 1908).

Egypt and the Army (Elgood, 1924).

The History of Canada (W. L. Grant).

Nova Scotia (B. Wilson, 1911).

Report on British North America (Sir C. P. Lucas).

The Union of South Africa (R. H. Brand, 1909).

Short History of Australia (E. Scot).

History of the Australasian Colonies (Jenks, 1912).

The English in the West Indies (J. A. Froude, 1888).

The Lost Possessions of England (W. F. Lord, 1896).

International Relations of the Chinese Empire (H. B. Moisse).
(Kelly and Walsh Shanghai).

Whats wrong with China (Gilbert).

Why China sees Red (Putman-Weale).

Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).

11.—Military Geography.

Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).

Imperial Military Geography (Capt. D. H. Cole, 1928).

Introduction of Military Geography (Col. E. S. May).

Imperial Defence (Col. E. S. May).

Main Feature of the Japanese and other Pacific Problems.

(Reprinted from *Morning Post*. Sifton Præd).

Britain and the British Seas (H. J. Makinder, 1907).

Military Geography (Macguire).

Imperial Strategy (Repington).

War and the Empire (H. Foster).

Historical Geography of British Colonies (Dominions), 7 Vols.

(Sir C. P. Lucas, 1906-17)—

Vol. 1, Mediterranean.

Vol. 2, West Indies.

Vol. 3, West Africa.

Vol. 4, South Africa.

Vol. 5, Canada.

Vol. 6, Australia.

Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

12. *Foreign Armies.*

OFFICIAL.

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- Handbook of the Polish Army, 1927.

13. *Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary tactics or the art of war, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 500 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 509, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet* black. No washes or ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

*NOT to be removed from the library.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be taken away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is now available.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Historical Record of the 110th Mahratta Light Infantry,	1927 1914-18.	..
2. Report on the Civil Air Transport in the West Indies. (Presented by H. M. Stationery Office, London.)	1927	Official.
3. Notes on the Various Arms of the Service. (Presented by Messrs. Gale & Polden, Ltd., London.)	1927	Capt. A. M. Barrett.
4. The Staff and the Staff College .. (Presented by the Oxford University Press, Bombay.)	1927	A. R. Godwin Austin.
5. Imperial Military Geography, 5th edn. (Presented by Messrs. Sifton Praed & Co., Ltd., London.)	1928	Capt. D. H. Cole.
6. All the World's Aircraft .. (Presented by Sampson Low, London.)	1927	G. G. Grey and F. Jane.
7. The Official History of Australia in the War, 1914-18. (Presented by Messrs. Angus Robertson, Ltd., Sydney.)	1927	S. S. Mackenzie.
8. The Star and the Crescent. The Story of the 17th Cavalry.	1927	Major F. C. O. Yeats-Brown.
9. The Palestine Campaigns .. (Presented by the Oxford University Press, Bombay).	1928	Colonel A. P. Wavell.

BOOKS PURCHASED.

<i>Title.</i>		<i>Published.</i>	<i>Author.</i>
1. Sir Henry Wilson's Life and Diaries, Vols. I & II.		1927	Sir E. C. Callwell.
2. Bolshevist Russia	..	1927	Anton Kralgren.
3. Soviet <i>versus</i> Civilization	..	1927	Augur.
4. Elementary Economics	..	1926	Sir Sydney Chapman.
5. The Growth of the Army and the Empire.		1927	..
6. Lombard Street—The Money Market.		1927	W. Bagehot and Hartley Withers.
7. Story of the Battle of Waterloo	..	..	Rev. R. Gleig.
8. Commercial Air Transport	..	1926	Lt.-Col. Ivo Edwards, and F. Tymms.
9. War Birds	..	1927	Diary of an Unknown Aviator.
10. The Revolt in the Desert	..	1927	T. E. Lawrence.
11. Whitaker's Almanack	..	1928	..
12. Pegasus	..	1925	Col. J. F. C. Fuller.
13. Moltke	..	1921	Lt.-Col. F. E. Whittton.
14. The Truth about Jutland	..	1927	J. E. T. Harper.
15. The Two Battles of the Marne	..	1927	Foch, Joffre, Ludendorff and the Ex-Crown Prince of Germany.
16. Chemical Warfare	..	1921	A. A. Friers and C. West.
17. Citizenship in India	..	1923	Capt. P. S. Cannon.
18. The Garden of Adonis	..	1927	A. L. Carhill.
19. Why China Sees Red	..	1926	Putman Weale.
20. Napoleon	..	1927	Emil Ludwig.
21. The International Relations of the Chinese Empire, 1834—1911, Parts I, II, III.		1918	H. B. Morse.
22. What's Wrong with China	..	1926	R. Gilbert.
23. The Origin of the Next War	..	1926	John Bakeless.
24. You'll be a Man my Son	..	1927	Jason Gurney.

BOOKS ON ORDER.

<i>Title.</i>	<i>Author.</i>
1. Army and Sea Power	.. Major H. G. Eady and Major R. A. Pargiter.
2. China in Turmoil	.. King.
3. Baghdad and the Story of its Fall	.. Capt. M. Amir Bey.
4. Five Years in Turkey	.. Liman van Sanders.
5. Memoirs of Prince Max of Baden	.. ..
6. The First Flight Across the Polar Sea.	Amunsden and Lincoln Ellsworth.
7. The Beginnings of Organised Air Power.	.. J. M. Spaight.
8. India by Air	.. Sir Samuel Hoare.
9. Navies and Nations	.. Hector C. Bywater.
10. Masters of the War	.. D'Esterre.
11. Customs, Manners and Ceremonies of the Hindus.	Abbe Dubois.
12. The World Crisis by Winston Churchill.	.. A Critical Examination by Lord Sydenham.

IX.—Pamphlets.

The following may be obtained by V. P. P., plus postage, on application to the Secretary :—

- (a) British and Indian Road Space Tables (separately), As. 12 each.
- (b) Diagram of Ammunition Supply (India), As. 4.
- (c) Diagram showing new system of maintenance in the field at Home, As. 8.
- (d) Military Law Paper, questions and answers, As. 4. (As used at the A. H.-Q. Staff College Course, 1926).

X.—Schemes.

Please see the Editorial of this number regarding the issue of schemes. Those now advertised can be obtained by V. P. P., plus postage, on application to the Secretary.

- (B) *Mountain Warfare* Rs. 3.
- (i) Three lectures on Mountain Warfare.

(G) Copies of the recent (February 1928) Staff College Examination papers are available :—

Strategy and Tactics papers (with maps)	.. Rs. 3 each.
Other papers .. .. .	.. Re. 1 ..

(H) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War" .. As. 12 each.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

Prize Essay Gold Medallists.*(With rank of Officers at the date of the Essay.)*

- 1872..ROBERTS, Lieut.-Col. F. S., v.C., C.B., R.A.
 1873..COLQUHOUN, Capt. J. S., R.A.
 1874..COLQUHOUN, Capt. J. S., R.A.
 1879..ST. JOHN, Maj. O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., s.c.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry.
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
 1899..NEVILLE, Col. J. P. C., s.c.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905..COOKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., R.A.
 1909..MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
 1911..Mr. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q.V.O., Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., v.D., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., M.C., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923..KEEN, Colonel F. S., D.S.O., I.A.
 1926..DENNYS, Major L. E., M.C., 4/12th Frontier Force Regiment.
 1927..HOGG, Major D. Mc. A., M.C., R.E.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., V.O., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* *N. B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894...O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(*conold.*).

- 1910..SYKES, Maj. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911..LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..PRITCHARD, Capt. P. P. A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917..MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918..NOEL, Capt. E. W. C. (Political Department).
- 1919..KEELING, Lt.-Col. E. H., M.C., R.E.
ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920..BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..HOLT, Major A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department.
- 1924..HAVILDAR RAHMAT SHAH, N.-W. F. Corps.
NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..SPEAR, Captain C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..HARVEY-KELLY, Major C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927..LAKE, Major M. C., 4/4th Bombay Grenadiers.

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EDITORIAL.

The decisions of the Home and Indian Governments with regard to the Skeen Committee report have now been made public.

It has been recognised that a further degree of Indianisation is necessary but it is stated emphatically that there must be no diminution in the efficiency of the Army in India and that there must be no breakdown in the supply of British recruits to the commissioned ranks of the Army.

The initial recommendations of the Committee that the number of direct vacancies at Sandhurst open to Indians should be increased from 10 to 20 a year have been accepted and 5 to 10 vacancies a year in addition are to be reserved for Viceroy's commissioned officers. Indians are also to be eligible for cadetships at Woolwich and Cranwell with a view to the formation of Indian artillery, engineer and air units.

As regards the further expansion of vacancies, the Government could not accept the Committee's proposals for an increase by a time scale from the years 1929 to 1952, irrespective of whether efficient and suitable candidates were forthcoming. Nor was the Committee's recommendation for the abolition of the 8 unit scheme, initiated by Lord Rawlinson, accepted.

The main points are, therefore, that Indianisation is to be confined the 8 units already in process of being Indianised—newly joined British officers being posted to non-Indianised units—and that Indians will get more vacancies at Sandhurst—provided, of course, that suitable candidates, up to the required standard, are forthcoming to fill the extra vacancies.

After every great war in history there has been a not unnatural revolt against the use of armed forces and a most worthy desire to abolish war for ever. This has generally found expression in the cutting down of standing armies to extreme limits and in a general desire to enter into treaties and agreements which may make war impossible.

The foundation of the League of Nations after the last and greatest war in history has been a step further in this direction than has ever been made before and the question of world disarmament has recently been strongly urged by some of the larger nations. No nation is more desirous for peace than Great Britain but, with the responsibility of the defence of a large Empire on her shoulders and in view of the absolute necessity for keeping open the trade routes to feed her population, which could only exist on the food resources of the country for a few weeks, it behoves her to examine any proposals for general disarmament with the greatest care, before surrendering one iota of that security which is so vital to the existence of the country and the continuance of the Empire.

Her armed forces have already been reduced to limits which, in the opinion of many, transcend the margins of safety.

History disclosed the frailty of human nature with regard to war and it is remarkable, even now, how soon the memory of the last great war is fading—especially among the younger generation who did not really realise the suffering it caused throughout the world.

It has been generally spoken of as “a war to end war” but it is significant that, since 1918, we have not had one really peaceful year in spite of the general war weariness of Europe and the heartfelt desire of all nations for a period of peace at any price for recuperation and stabilisation.

There have been various conflagrations in the Balkans, revolutions in China and in Bulgaria, while in August 1923 the Italian bombardment of Corfu tested the worlds new instruments of peace to the limit. There have been revolts in Brazil and Georgia and a war in Morocco.

The desire for world peace and for the reduction of expenditure on armaments generally is as strong in Great Britain as in any country in the world but very safe guarantees of reciprocity would be required before she could proceed much further in disarmament than she has done already.

The Royal Air Force have suffered a serious loss in the death of Flight-Lieut. Kinhead while attempting to create a new flying speed record in the Solent.

Flight-Lieut. Kinhead had a very distinguished war record and young officers of his stamp can ill be spared.

The death roll of airmen engaged in experiments of various sorts is becoming a long one but, for almost every great advance in knowledge, such prices have had to be paid.

It cannot be said that we have yet attained complete mastery of the air—or anything approaching it—but such great strides have been made in a comparatively short period of years that we have every reason to suppose that air transport will become as common, and almost as safe, as road transport, within the lifetime of some of the present generation.

The value of an efficient air transport service to a great Empire such as ours cannot be over-estimated but, in the pioneer stage of air mastery, a certain number of casualties cannot be avoided.

* * * * *

Sympathy must be felt for the Navy for the manner in which a not very important incident in the course of the discipline of the Fleet was represented in large headlines in the Press as “mutiny”, “revolt” etc., without any attempt to discover whether there was any authority for such statements. Having once adopted this alarmist attitude it was continued throughout the Court-martial, every smallest detail being described and press photographers being in close attendance.

We are living in an age of sensationalism when everyone appears to be out to create records, and if there is no sensation forthcoming then one has to be created. A more reasoned attitude might, however, have been expected on a rather domestic matter of Naval discipline.

Discipline in the Services generally is always a subject of argument and discussion among civilians. The importance of every little detail of discipline is only understandable to those who have to lead men into dangerous places in war, where the spirit may be as unwilling as the flesh is weak, and it is only discipline and training which keeps them going. It is greatly to the credit of the British soldier of to-day that his general discipline and behaviour is so high, compared with that of the soldier of 100 years ago when the penalties for misbehaviour were so much more severe.

Considerable interest has been aroused, and a certain amount of surprise occasioned by the abolition of the death penalty for certain offences on active service. There have always been many advocates for the abolition of the death penalty—generally people who are unable to realise the extreme importance of discipline and control, under circumstances where both are apt to go by the board and the last attempt to do away with the death penalty was made not long ago in the House of Commons and was defeated by a fairly large majority.

The Government have, however, now decided that the time has come for its abolition—in certain cases only.

* * * * *

Several articles have been received of late on the subject of the difficulties of fitting into the recognised training periods in India all the necessary instruction in accordance with Training and Manœuvre Regulations, and it is regretted that lack of space has forbidden the publication of most of them.

“Training and Manœuvre regulations” states that “The object of individual training is to prepare the individual for the duties which he will be required to carry out in war” and “Individual training is an essential preliminary to collective training and the more thorough the individual training has been the more satisfactory will be the subsequent collective training.”

Full and thorough individual training is more essential for the Indian soldier than for the British but, although facilities for collective training are much greater in India than in England, the difficulty of fitting in an adequate period of Individual training for the sepoy of the Indian Army is far greater than in the British Army.

The Individual Training season in India begins on April 1st and ends on October 15th. The beginning of the Individual Training season coincides with the opening of the leave season and, through out the hot weather, so many men are away on leave that, in stations where duties are heavy, a thorough system of individual training is almost impossible.

In an army recruited mainly from the cultivator class a long period of summer leave is necessary.

The opening of the Collective Training season should see the individual thoroughly trained in all his duties so that the tactical training of sub-units can commence at once, to be followed progressively by battalion and brigade training and manœuvres.

In India, however, owing to difficulties of weather and crops, manœuvres often have to take place before Xmas, which may involve an unduly hurried collective training period and then rather a blank time between the end of manœuvres and the official commencement of the next Individual training period.

These difficulties of leave, weather and crops are patent but unavoidable and can really only be overcome, in cases where manœuvres have to take place so early, by fitting in as much unit training as possible into the three good cold weather months after Xmas.

In cases where weather and crops permit, the ideal would appear to be to concentrate on platoon, company and battalion training before Xmas, giving January for higher training and leaving February and March to supplement the short hot weather period available for individual training.

* * * * *

Since the publication of the last Journal two important changes have taken place in British Cavalry organization and equipment. One is the abolition of the lance as a weapon of war and the other is the abolition of the Hotchkiss gun—with the possible exception of the retention of two guns per regiment for Anti-Aircraft purposes.

One cannot regard the passing of the lance without a thought of regret—its abolition really brings home to one the passing of the last shreds of the glamour of war and the advent of the cold efficiency of the machine. The decision to abolish the lance produced the expected amount of criticism and discussion by its supporters in the Press. The history and the prowess of the lance throughout the ages and its moral effect, by no means altogether absent in the last war, were related at length and were of considerable interest.

There is no doubt that the moral effect of the lance, particularly against an uncivilised enemy, is much greater than that of the sword. On the other hand it is more conspicuous, heavier, and more unwieldy.

Indian lancer regiments will continue to be armed with the lance, which has many successes to its credit in frontier affrays.

The abolition of the Hotchkiss gun followed logically on the reorganization of a British Cavalry regiment into two sabre squadrons and a machine gun squadron with an increased number of Vickers guns.

The Hotchkiss gun has also been abolished in India.

* * * * *

The past year has seen the passing of several of the leading figures of the Great War, both military officers and civilians.

The strain of the war years for those in positions of responsibility and high command must have been intense and is only just being fully realized.

The outstanding loss from the point of view of the Army is that of Earl Haig whose funeral procession was one of the most impressive sights seen in London for many years.

It is extraordinary how the Nation's debt to him was only appreciated fully after his death. He was not a seeker after popularity, nor person of magnetic personality who would appeal to the imagination of the crowd, but his quiet determination, invincible optimism and physical strength and fitness to withstand such a continued strain of chief command were a tremendous asset to the British Army, in the greatest struggle it has ever taken part in.

It is not generally realized what an enormous army he commanded compared, for instance, with the small British army commanded by the Duke of Wellington at Waterloo.

His chief difficulties must have been the very close touch with his Government, owing to the excellence of modern communications, and the inevitable strain of co-operating with several allied commanders-in-chief in their own country over a long period of operations.

In Sir Henry Wilson's book it is most marked that, in all the schemings for advancement or for additional powers and authority, Sir Douglas Haig is never concerned. He went on his way imperturbably to carry the war to a successful conclusion so far as it lay in his power, and when the question of supreme command became a vital issue he was content to subordinate himself to the French Commander-in-Chief.

His book, which, it is understood, is to be published in 10 years' time will be awaited with the greatest interest and will undoubtedly be a very valuable addition to the history of the Great War.

* * * * *

A short time ago the Institution put on sale a certain number of tactical schemes drawn up with the object of assisting officers working for the Staff College and Promotion examinations.

These schemes, which are advertised in the Secretary's Notes at the beginning of each Journal, have been in great demand but there have been so many small changes in the regulations with regard to order writing, etc., during the last two years that some of these schemes are not quite up-to-date. These have therefore been withdrawn from circulation until they can be corrected. There are still, however, a certain number of schemes available (*vide* Secretary's notes in this number) and the schemes used on the forthcoming Army Headquarters Staff College Course will also be available in August.

* * * * *

The value of pigsticking from the point of view of military training and the development of those qualities of courage and speed of thought and action which are so essential for the officer, has been commented on previously in these columns and a recent journal contained an interesting account of last year's Kadir Cup.

In his introduction to the first edition of "The Houghunters Annual" His Excellency the Commander-in-Chief emphasises the value of "one of the finest sports in the world" and wishes this new journal all success.

The first edition of what, we hope, will be a flourishing publication, is of the greatest interest and says much for the zeal and initiative of the two co-editors whose names are well-known to all pigstickers in India. It contains forewords by Sir Robert Baden-Powell and Major-General Wardrop and includes summaries of the doings of the well-known tent clubs of India and many interesting articles, both historical and instructive, on pigsticking generally.

In these days of inflated prices for polo ponies it is difficult for the man of small means, not in a cavalry regiment, to get much of a look in at polo in a big station and, if he is likely to be in the neighbourhood of a good pigsticking country, he will probably find that this form of sport will give him the best fun for his money.

A moderately good pigsticker can be obtained far cheaper than the average tournament polo pony and, although it takes much practice and experience to become a really good hunter and killer of pig, the beginner will find that, by watching the experts, he will soon become sufficiently proficient to obtain a great deal of pleasure and very fine exercise from hunting the boar.

Pigsticking in India is undoubtedly on the upward grade and "The Houghunters Annual" should be in the possession of every pigsticker.

* * * * *

Three recent sporting events of note have taken place at Home which have been followed with the greatest interest by all those interested in sport in India.

The first is England's victory in the Rugby football championships after one or two rather lean years. She won all her international matches and has laid the foundations of a young back division which should develop into a brilliant combination in the next few years.

The second event of note is the Grand National, with only two horses finishing and a 100 to 1 chance cantering in alone. One advantage of living in India is that one has the amusement of reading the forecasts for the race after the event instead of before. The Indian papers had come to the conclusion before the race that it was quite impossible for anything but one of five horses to win—and not a word of apology was given when they all fell by the wayside early in the race! If Grand National form could be estimated so accurately it would not be what it is—one of the most open and sporting events in the world.

The overwhelming victory of Cambridge in the boat race, following on their continuous victories in this and almost every other form of sport for the past few years, have given supporters of Oxford furiously to think.

Detailed accounts of the race have not been received up to the present, but much has been made of the exhaustion of the Oxford crew at the finish compared with the freshness of Cambridge, the conclusion being drawn that Oxford were not properly trained. This, however, does not follow at all as, in any competition where one team is outclassed—as Oxford apparently were—the losers take much more out of themselves than the winners.

Success in sport at the universities certainly generally goes in cycles, but Oxford's cycle should by now be overdue.

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The Army Headquarters Staff College Course will be held in Simla from July 16th to August 10th.

A NOTE ON THE ECONOMIC INDEPENDENCE OF THE UNITED STATES.

By

CAPTAIN D. H. COLE, M.B.E., A.E.C.

The foreign policy of a nation is largely dictated by its economic needs. The United States, possessing vast territories of almost incredible richness in agriculture, minerals and water power, sparsely inhabited in comparison to the countries of Western Europe has been able for a century and a half to maintain its economic independence of foreign products to an extent impossible in Europe. It has had the further advantage of a continental position with all the advantages of insularity—an insularity attained by 3,000 miles of sea in one direction and 6,000 miles in another. These two factors of economic and strategic independence have led to the careful maintenance of the famous Doctrine of Isolation defined by Washington in his farewell address to his fellow countrymen :—

“ Europe has a set of primary interests which to us have none or a very remote relation. Hence she must be engaged in frequent controversies, the causes of which are essentially foreign to our concerns. Hence, therefore, it must be unwise in us to implicate ourselves by artificial ties in the ordinary vicissitudes of her politics, or the ordinary combinations and collisions of her friendships or enmities. Our detached and distant situation invites us to pursue a different course . . . ” “ is our true policy to steer clear of permanent alliances with any portion of the foreign world . . . Taking care always to keep ourselves by suitable establishments or a respectable defensive posture, we may safely trust to temporary alliances for extraordinary emergencies.”

The object of this brief note is to suggest that there are certain economic factors at work in the United States which must play a gradually increasing part in weaning that country from the Doctrine of Political Isolation. Other factors leading to the same end, such as the shrinking of the world owing to the speeding of communications will not be considered.

It has frequently been said that “ import trade for the United States is only the dessert on top of a good meal.” This statement, almost absolutely true thirty years ago, requires to-day some analysis and criticism. It cannot be accepted as completely correct even in

regard to the import of raw materials, quite apart from the vast quantity of manufactured imports required by a large population living up to the high standard of the American public.

These raw materials required by the United States may be divided into three categories :—

- (1) Raw materials which are produced in sufficient abundance to meet the needs of the United States, without the necessity of foreign supplies.
- (2) Raw materials which are produced in great but not sufficient quantities.

The production of these in time of war might be stimulated or requirements diminished by economy or rationing to make the country self-sufficient.

- (3) Raw materials produced only in trivial quantities, quite insufficient for the country either in peace or war.

In the first category the United States is peculiarly fortunate. She is the world's most important producer of 13 of the chief minerals, in which are included coal, iron, copper, lead, zinc, silver, petroleum, natural gas, phosphate and salt. She produces $\frac{2}{3}$ of the world's commercial cotton, $\frac{1}{3}$ of the world's supply of iron ore, $\frac{6}{10}$ of the total production of copper, $\frac{7}{10}$ of the total production of petroleum and $\frac{1}{3}$ of the entire tobacco crop. She grows enough wheat to feed her own people and have a surplus—gradually diminishing—for export. Almost all the helium obtained in the world comes from Texas.

In the second category perhaps the most important commodity is sugar. In spite of a great production of cane sugar in Louisiana, of beet sugar from the various Mississippi States and of large quantities of syrup obtained from Indian corn the United States is not self-supporting in this respect. Imports of sugar from Cuba, Hawaii and other countries amount to a value of £ 50 millions annually. Hides and skins and the substances, such as hemlock, used in their tanning are imported in large quantities. Half of her requirements of wool are obtained from the great wool producing countries, such as Australia. Potash and nitrates, though efforts were made during the War to stimulate production, are still largely imported. Even timber, once so lavishly provided by nature, has been squandered and much of the supply now comes from Canada. "Ten thousand tons of newsprint paper per day are now used in the United States and our forests can

supply only a part of the pulp. We depend on Canada and Northern Europe for the medium of our daily knowledge of the world. We are still burning up our flax fibres, straw, corn stalks and waste paper and leaving to decay better logs than on the average go to a British sawmill.”*

The third category contains a number of commodities, some of which are of vital importance. The American is a coffee drinker and consumes almost 10 lbs. of coffee per head each year. More than three quarters of the amount required is imported from Brazil. The United States produces $\frac{2}{3}$ of the manufactured rubber in the world, but $\frac{9}{10}$ of the total supply of raw rubber is controlled by British capital and mostly produced in British territory. The United States is therefore definitely dependent in this respect. Further, she uses 75,000 tons of tin annually in her motor and canning industries, but only produces $\frac{1}{5000}$ part of this quantity. The balance comes chiefly from the Malay States and in smaller amounts from Bolivia. Her requirements of nickel are supplied entirely by Canada. Manganese ore which is essential in steel making is almost completely imported. Chromite and Tungsten, necessary for high grade steels and munitions can only be produced at an uneconomic cost and are obtained from Rhodesia, New Caledonia and Burma. Like Great Britain she is dependent on Russia for Platinum and on Greenland for Cryolite, the essential flux for the production of Aluminium.

It is therefore obvious that there is a considerable degree of dependence in relation at least to the commodities in the second and third categories. It should be observed, however, that this dependence is greatly lessened if the American Continent as a whole is considered. Coffee and rubber from Brazil, tin from Bolivia, nickel and timber from Canada, sugar from the West Indies, hides and skins from the Argentine could provide the chief wants of the United States. There is thus an economic basis for the policy of Pan-Americanism, and for the gradually widening interpretation of the Monroe Doctrine to include financial control over Central and South American States. The dangers arising from this economic dependence and from a desire for markets is that “America for the Americans” may tend to mean “America for the United States.”

*American Dependence on Foreign Products. Professor A. P. Brigham, *Geog. Journal*, May 1924.

The present condition of affairs is being complicated and modified by two factors :—

- (1) The industrialization and urbanization of the United States.
- (2) The rapid growth of population.

“ In 1860,” says Professor Morrison of Haward, “ the average American was a yeoman farmer : since 1900 he has been an employee. In 1865 only certain parts of New England and the Middle States had been industrialised, American technique in general was inferior to that of Great Britain and labour combination was making a fresh start. By 1900 industry had captured the Middle West ; agriculture, itself transformed, had conquered the Great Plains ; the United States had become the greatest iron and steel producing country in the world.”* Manufacturing and industry, by 1900, were definitely gaining an ascendancy over agriculture. This is a process with which we are unpleasantly familiar in England. Once started it grows like a snowball. The city and town populations expand at the expense of or, at any rate, more rapidly than those of the country districts. The appearance of the land changes. The proportion of food production to non-food-producers decreases. Sometimes the call of the cities draws like a magnet and land once cultivated goes back into pasture.

This process is going on in the United States. In 1890, 36 per cent. of the population lived in towns of over 2,500 : in 1910 this had increased to 46 per cent. ; in 1920 to 51 per cent. and it is expected that the census of 1930 will reveal over 60 per cent. of the population as urban. Further, it is estimated that since 1920 the total acreage of farms has decreased by 28 million acres.† On the other hand manufacturing has, of course, enormously increased. Between 1900 and 1926—to take only one illustration—the American production of pig iron has risen from 14 to 37 million tons a year. In Great Britain in the same period it has remained practically stationary. Markets for manufactured goods are becoming absolutely essential to this growing industrial organism. South America, the Latin American States and the Far East are the most obvious customers ; and thus the United States from another economic angle finds herself in close relations with the South American and Latin republics, with China

* *History of the United States* (Oxford Univ. Press), 1926.

† *Statesman's Year Book*, 1927.

India and the countries of the East, and in competition with Great Britain, Germany, Japan and other industrial nations already partly in possession of these markets. The United States demand for "The Open Door" in Asia while maintaining a policy of the "Shut Door" in the States is an evidence of this economic trend.

To complicate still further the growth of industrialism and urbanization there is the rapid growth of population. The census of 1900 gave the United States a population of 76 millions, that of 1910, 92 millions, and this had further risen to 106 millions in 1920. The population is increasing at an average of $1\frac{1}{2}$ millions per year. Even if this rate be substantially reduced the population in 1950 will be at least 150 millions and in 2000 A. D. it will be 225 millions. Professor Raymond Pearl of Baltimore, however, contends that the increase will not be so rapid. He predicts a flattening of the population curve as the country approaches saturation point, and says that the population will not reach the 200 millions mark until 2100 A. D.* On the other hand that the increase suggested is far from remarkable under circumstances of industrialization will be realized by a comparison with the population of Europe which under no more favourable conditions increased from 180 millions in 1800 to 450 millions in 1910. (*Fueter, World History 1815 to 1920*).

At the present time only one-eighth of the agricultural land in the United States produces the farm products exported abroad. Assuming the present rate of increase of population, long before 1950 this available surplus will have ceased to exist. Even though marshes are drained, deserts irrigated, and power agriculture displaced by the intensive farming of the old countries it is calculated that before the end of the century the United States will be, on a considerable scale, a food importing nation. This is likely to be further intensified by that movement of population to the cities and towns which has already been noticed. As this process continues and the Negro becomes urbanized labour for the cotton plantations in the South will become scarce. Indeed symptoms of this have already arisen. The United States will thus, during the 20th century, repeat the process which between 1750 and 1850 changed Great Britain from a self-supporting land to one dependent for many of her necessities of life partly on overseas trade. Further, this period may coincide with the end of the present enormous output of petroleum which is one of

*The Biology of Population Growth, R. Pearl (1926).

the corner stones of American commerce. The lavish production of petroleum cannot indefinitely be continued. In September 1926 the United States Federal Oil Conservation Board estimated the reserves of oil in proved areas in the United States as only some six years' supply. Other authorities predict a serious shortage in less than 30 years. After that, they say, expensive methods of obtaining the petroleum by water or gas pressure will have to be resorted to, or the United States must fall back on her great reserves of oil shale and obtain it by the costly method of mining and distillation. Long before this stage is reached, unless some substitute for petrol has been discovered she will, by economic pressure, be compelled to import from those lands where petroleum still gushes up "free" from the earth. At a time when she has begun to import agricultural produce she will also have lost her natural lead in the petroleum market. It is symptomatic of this probability that American oil companies are seeking concessions in Asia Minor, South America and Portuguese West Africa. It is also symptomatic of it that the United States after the treaty of San Remo demanded a part in the production of the future Iraq oil fields, and eventually obtained for American companies 25 per cent. of the shares in the Turkish Petroleum Company which is prospecting and working those fields. Thus by the mere danger of future economic dependence in connection with this commodity the United States is being already entangled in the web of foreign affairs.

The trend of economic events outlined in the preceding paragraphs suggests a number of important conclusions. The first of these is that the United States is already definitely dependent on foreign sources for a number of vitally important commodities. These commodities could, however, nearly all be obtained in some part of the American Continents. Hence there is a strong incentive to the United States to try to achieve that union—economic if not political—of all the American countries under her leadership, which would be the fully ripened fruit of Pan-Americanism.

The second conclusion is the growing dependence of the United States owing to rapid industrialization and growth of population on markets abroad and on imported raw materials for her factories. This dependence as it increases will be accompanied by a corresponding necessity for the security of her lines of sea communication to every

part of the world. In this respect her interests will be the same as those of the British Empire—the absolute security of sea-borne trade in peace and war.

The last conclusion is not the least important. At present a little less than 40 per cent. of the overseas commerce of the United States is carried in American ships. In spite of the enormous development of tonnage in the American mercantile marine during the War, since the year 1923 there has been a progressive decrease in the American owned tonnage entering American ports. Great Britain alone carries as much of the trade from the United States as do the ships of that country. Further, there has been a decrease in the tonnage under construction in the United States. In 1927 only 100,000 tons of shipping were being built, a remarkably small figure in comparison with more than 1 million tons under construction in Great Britain. It is extremely unlikely however that this condition of affairs can be permanent. It is the effect of the process of internal development which has absorbed the energy of the nation on internal affairs to the exclusion of almost everything else. Prior to the Civil War the United States was becoming a serious rival to Great Britain as the Pickford of the seas. Her vessels came in large numbers to India and the Far East. Her clipper ships of the 50's, which by their beauty and their speed left our shipbuilders breathless captured much of the China tea trade. From the American Civil War onwards to the Great War the settlement of the empty lands of the Middle West and West, the building of railways, the intensive development of industries and trade were the immediate needs. Now that this process has given way to industrialization on a vast scale it is unlikely that the United States will not once again develop a great mercantile marine. No argument from the ground of racial propensities can be urged against such a development, and economic needs would appear to point in that direction.

AN ARMY AIR ARM.

BY

MAJOR E. J. STROVER, 3/20TH BURMA RIFLES.

There is a wide spread feeling in the army to-day that it should possess its own Air Arm. The desire for it has been considerably increased and more boldly expressed since the navy has obtained control over its own Fleet Air Arm.

No responsible army officer wishes to abolish the Air Ministry and Air Staff and to divide the whole of the Royal Air Force between the navy and the army. The necessity of an Air Force to win the Air War is thoroughly realised to-day. To return to the system of the Royal Flying Corps and the Royal Naval Air Service of 1915 with its competition, friction and waste, and without any real co-ordinating authority is rightly regarded as impossible. The only demand is that the Army Co-operation Squadrons should be a part of the army, or at least as much under the control of the army as the Fleet Air Arm is under the control of the navy.

It may be useful to examine the soundness of such a policy. In order to discover its soundness one must give decisions on two questions :—

1. Is it necessary ?
2. Is it practicable ?
- (1) *Is it necessary ?*

There can be no question that it would be a considerable advantage to the army to possess its own Air Arm. A general can make more use of a squadron of aeroplanes if it is completely under his command than if it is merely co-operating with him. Cavalry, artillery, infantry, armoured cars and tanks will co-operate more easily with pilots who belong to the same service and wear the same uniforms. The army officers will feel secure that the pilots of aircraft who have trained with them in peace, will not be taken away from them in war.

There is one point, however, which is not generally realised in the army. It is not necessary for the pilot of an army co-operation aeroplane to have been trained in the army. The result of fourteen years' experience of the Royal Air Force has proved beyond doubt that no man can make deductions in the air. The pilot of an aeroplane can only see a portion of the enemy's troops. To make deductions of the enemy's dispositions from the position of such troops

as happened to be exposed to his view when he flew over them, is extremely dangerous and likely to mislead the army commander. The only man who can make deductions with any reasonable certainty is the staff officer on the ground who receives information from all sources, not from one aeroplane only but from several aeroplanes, from cavalry, infantry and armoured cars.

For this reason pilots of army co-operation aircraft are taught to report exactly what they see and to surmise nothing.

Twice on manoeuvres in England in 1925, an army staff officer was flown over the enemy, saw a few troops and made deductions from what he already knew. His general, naturally biassed in favour of the opinion of his own staff officer, made his own dispositions to his cost.

The pilot of an army co-operation aeroplane is trained to observe accurately and to report accurately. Previous training in the army may be useful in training himself to observe troops from the air but he must overcome his natural tendency to make deductions.

The advantage to the army, therefore, in having its own Air Arm, is not so much that previous training in the Army is advantageous to a pilot, but that a general could exercise better control, that army and air officers could work better together and, greatest of all, that army co-operations pilots would remain with the army in peace and in war. Such advantages may be greatly neutralized if the Air Force will place army co-operation squadrons under the command of the army on the outbreak of war and will leave their pilots with their squadrons.

From the above it appears that it would be a considerable advantage to the army to possess its own Air Arm, but that it is not a vital necessity.

The second point to consider is :—

(2) *Is it practicable?*

The personnel of the Fleet Air Arm now consist of naval ratings and the pilots are almost entirely naval officers. Recruitment of officers for the navy is easier than for the army, especially since the former have thrown their doors open to the public schools. There is practically no competition for Sandhurst. If the army created its own Air Arm it is very doubtful if sufficient officers could be obtained for it. It is certain that no officers could be spared from the Indian

Army. It is unlikely that the **Army Air Arm** would be likely to attract boys who now go to Cranwell. The spirited youth who enters Cranwell now, often against his parents' wishes, will prefer to serve in the **Royal Air Force**.

It is probable, then, that the army could not find sufficient officers for its **Air Arm**.

(3) Finally let it not be supposed that the navy, by possessing its own **Air Arm**, has gained much and lost nothing. It has sacrificed much of the good feeling and anxiety to co-operate, which formerly existed between the Navy and the **Air Force**. Co-operation between these two Services is even more necessary now than it ever was.

In almost any conceivable future war, the navy will require the co-operation of shore-based aircraft, of flying boats and of floatplanes (still in the hands of the **Royal Air Force**), and if co-operation is then no better than at the present time the navy will have lost more than they have gained.

Co-operation between an **Army Air Arm** and the **Air Force**, in anything except a small war, would be more important. An **Army Air Arm** will be unable to function unless the **Royal Air Force** can secure it from hostile air attack. For this reason the army must be careful how it follows the lead of the navy. To lose any of the good feeling and co-operation which exists between the army and the **Air Force** to-day would be to lose more than would be gained by the establishment of an **Army Air Arm**.

Co-operation between different Services is not natural to British Officers. The British Officer is naturally individualistic and his public school training teaches him to be loyal to his own particular crowd while regarding the other crowd with tolerant and good natured contempt. Co-operation between the Services must be assiduously cultivated and nothing which is gained must ever be lost.

(4) In view of the present dearth of officers, it would, therefore, appear most unwise to attempt to establish an **Army Air Arm**, especially since this arm is not vitally necessary. When the supply of officers for the army enables this experiment to be made, the greatest care must be exercised to see that, in gaining an **Air Arm**, we lose nothing of that co-operation which is vitally necessary for both Services.

THE CARDWELL SYSTEM.

By

LEE-ENFIELD.

(A REPLY TO A CRITICISM.)

An interesting *article appeared in the R. U. S. I. Journal of August this year on the Cardwell system, criticizing it and generally condemning it as no longer suited to our national requirements. Some of the sentiments expressed were, to an infantry officer, of so startling a nature that it was necessary to turn back to the beginning of the article to ascertain whether it could have been written by one of his own branch of the Service. This proved not to be the case, but constructive criticism is always useful and often of inestimable value. The article must therefore be considered in detail.

The writer pointed out that Cardwell's reforms, as amended by Haldane in 1907, had stood the test of two "wars of consequence". It will be readily agreed that this is no overstatement of the case. It has provided the basis of our army organization for nearly sixty years, including periods of profound peace and devastating war. It has witnessed inflation on an unprecedented scale and corresponding deflation. It produced a large Army Reserve efficient and available, thus combining strength with economy. It put into the Field, or at least prepared in peace, over eight divisions of regulars and fourteen divisions of Territorial troops complete in all arms, the result of the sorting out and re-organization of the old Volunteers. The system of expansion by the Militia, never a success, was thus definitely abandoned in favour of the Territorial Force. It was recognized that it would be impossible to put Militia up against first line troops of an European enemy. It established the Territorial System, which has since been extended, and now links all regular battalions, their depots and their Territorial brothers-in-arms. The system provided an expeditionary force, not only of unprecedented efficiency but of a size which met the original requirements of our allies.

Thus, the Cardwell System has much to its credit. Of course it may be argued that the original British Expeditionary Force was ludicrously inadequate to the task before it, that the Territorial Army was only for Home Defence, that the size of the problem was hopelessly under-estimated. It would however, be laying oneself open to the charge of "being wise after the event" if one seriously suggested

* The Cardwell System. A criticism. By Captain G. L. Appleton, R. A.

that in 1914 an organization for a force of seventy divisions was necessary, or that the Territorial Army should be available for service overseas, or that Universal Service should have been introduced. Such stupendous changes would naturally only be adopted by the nation in times of the gravest crises. Let us therefore come down to the detailed criticism before us of the Cardwell System. Boiled down to its essentials it seems to be as follows.

The system is obsolete, inadequate and inelastic, not fitted to our present day requirements, it subordinates our war strength to that of our Imperial peace garrison necessities, endeavouring to meet the contradictory requirements of both these demands. It has failed to produce a homogeneous army, and results at times in either colonial or home stations being over-garrisoned. It broke down in the Great War and experienced drastic alteration made inevitable by the existence of regimental water-tight compartments for providing officers, reinforcements, etc. It depended for its success on regimental *esprit de corps* which was either to some extent artificial or else replaced by Divisional *esprit de corps*; and finally in peace time it has resulted in glaring inequalities of promotion particularly amongst officers owing to the small size of the regimental unit.

A damning indictment and sufficient, if established, to go a long way towards securing the abolition of the system however well it has functioned in the past. The writer further points out that "Splendid isolation" is no longer possible, that we must consider the possibility of intervention in an European war in view of our increased liability to attack, notably from the air, and, in short, that the facts must be faced.

He puts forward certain specific recommendations as remedies for the serious shortcomings which are detailed above. These may be summarized as follows:—

- (a) The arrangement in large groups, *e.g.*, Wessex, Highland, Northumbrian, etc., of all infantry regiments with one large depot for each group.
- (b) The placing of all officers on, either, group lists or on one common list for promotion, in the same way as officers of the R. A. and R. E. The same method to be applied to cavalry. All officers to be promoted within their group and take their turn at service overseas.

- (c) Depots to send drafts to India, etc., as required. If Indian and Colonial establishments vary from Home establishments reinforcement and replacement to be made by means of drafts, the units remaining overseas.
- (d) Depots to train recruits for the regular army, but in war all recruitment to be taken over by a National Association. Depots thereafter to train recruits for regular units, and "maintain" Territorial Army units.

The critic is of the opinion that *esprit de corps* can be produced at short notice, that some of the tradition which has gathered round units' names is artificial, and that less than five per cent. of the unit take any great interest in their regiment's history, that touch between regulars and territorials from the same county is negligible, and that the extinction of the territorial principle would therefore be little felt.

These recommendations, whatever else may be thought of them, have the advantage of being for the most part definite, but before we can consider them we must discuss the premises on which they are based.

The critic claims that as regards preparation for war the present state of International affairs resembles that of 1870 rather than that of 1914. It seems therefore that we have by the writer's admission returned to the *status quo* and that other things being equal, the Cardwell System which was designed to meet the needs of the former period should still be suitable to our present necessity. On this point the writer's remark that we cannot return to our policy of Splendid Isolation is somewhat misleading. To-day, as in 1914, or indeed in 1870, we could not risk the danger of the Channel ports being in the hands of a definitely hostile power. That danger is only in degree greater than it was sixty years ago.

The Cardwell System was based on the fact that our requirements in peace overseas were roughly equal to the Home garrison, which Haldane formed into an expeditionary force for use in national emergency. This rough and ready rule has been found not unsuitable in the past though difficulties have arisen at times. It has yet to be proved unsuitable to present conditions. At times, as our commitments abroad have varied, our overseas garrisons have risen or fallen in strength. The ever-growing self-dependence of our Dominions has lightened our load in one direction and our new responsibilities

in acquiring the possession or the mandate over undeveloped lands, has, on the other hand, increased it. On the whole the tendency is steadily towards a decrease, any move in the other direction being usually of a temporary nature. The makeshift of regarding Gibraltar, the Rhine, etc., as Home stations has bridged several awkward gulfs and the disbandment of various units has prevented the army from remaining in excess of absolute necessity. The system may be regarded as adequately elastic though not ideal. As already stated, it produced an expeditionary force of a strength sufficient to satisfy our Allies' demands in 1914. Though reduced in strength it presumably still does so. It cannot be contended therefore that it does not produce an adequate army either in peace or war.

As for our present day requirements they are fairly uniform. Those in the Mediterranean and India are not likely to increase, those in Iraq and on the Rhine will decrease, in Egypt, China and the Soudan will be liable to fluctuation, what we lose on the swings, etc.

Regarding the strength of our army, like every other nation, we have to consider (a) a minimum establishment for peace time, (b) the maximum expansion we can afford for war. In common with others we have to steer between an army of highly efficient long service effectives, costly and unexpandable, and an army with an excessive reserve, cheap, large, but for a time, at least, inefficient. To these considerations we have to add our Imperial responsibilities, better met by the former alternative, and our war requirements better met by the latter. No nation can afford to maintain in peace, the force necessary to preserve it from all possible contingencies. It is sufficient to consider reasonable probabilities, guard against them and lay down the general lines for expansion to meet the needs arising in such a war as the last.

This combination of Colonial and European requirements has been met by different nations in different ways. It is doubtful if we have a great deal to learn from the various methods employed and, on the whole, our Imperial Police have worked efficiently and without undue expense, though this for the most part has fallen on the unfortunate tax-payer of the United Kingdom.

The birth of a General Staff at the beginning of this century, with a regular school of military thought laid down for the first time the duties and responsibilities of the British Army and the organization

of the British Expeditionary Force followed as a natural corollary. It will be readily admitted that to-day, however unsettled the state of Europe may be considered, it is far less explosive than it was in 1914 and that a diminution of our expeditionary force is therefore at least partly comprehensible. The Cardwell System therefore still appears to be able to "deliver the goods" in adequate quantities and to provide an answer to the double demand our requirements make.

No one will contend that we have a homogeneous army but, strictly speaking, nor has any other first-class power. "The proof of the pudding" may be gathered from the really remarkable way in which units of the Regular, Colonial "Service", and Territorial Forces worked up to a common level and it is true that each at times performed feats of which any other unit, from the Guards downwards, might well be proud. Our system produced no "Stoss truppen." Every division was a fighting division though sometimes it was better than at others, varying with the character of its commander. The accusation of lack of homogeneity leaves me cold; its deeds are a sufficient proof that the system on which the army was raised was essentially sound. It is true that the basis of recruiting had to be widened and that an Irish battalion occasionally got a batch of Midland recruits, but in practically every case the unit retained its original characteristics to the end of the war, the territorial system thus remaining triumphant.

It will be at once conceded by every infantry and cavalry commander in the late war that the mainspring of success was regimental *esprit de corps*; that this was artificial could not be admitted for a moment. From the day the recruit arrives in barracks he joins the Corunna Platoon, learns that his battalion fought at Dettingen, finds out that the Regiment's nickname, The Snappers, Fighting Fifth, The Diehards, Dirty Shirts, Holy Boys, The Kiddies, is derived from some tremendous feat of arms or cherished commendation by Marlborough, Wellington, Clive or Wolfe. He struggles through his third class certificate examination which tests his knowledge on these points, on the meaning of his cap badge; he reads his regimental magazine and battalion orders, which recall past battles, enjoys battalion holidays, Fontenoy and Plassey day, competes for trophies named after the great deeds or heroes of the past, examines the Regimental Memorial and joins the Old Comrades' Association. To an old regimental

soldier the statement that *esprit de corps* is artificial is to use a foolish expression—quite unthinkable. *Esprit de corps* is a living force and only those who instil it daily have any conception of the marvels it can work.

As to tradition this is almost as valuable. A good marching regiment simply does not have stragglers; the traditional boxing regiment is 25 per cent. to the good before the fight starts. The writer of this article tried to teach his battalion first-class hockey, the twin battalion had the finest team in the army for years. No, the tradition was not there, the men weren't interested, the first-class team was not evolved. Of course it would have come in time, but slowly and painfully. In the other battalion it was there no matter what happened to the individual members of the team. Tradition, pure and simple! In infantry and cavalry regiments both *esprit de corps* and tradition are in ninety-nine cases out of a hundred continuous. There is no need to force a plant of such healthy growth.

It is true that Brigade and Divisional *esprit de corps* came into prominence during the Great War, but this cannot take the place of the regimental spirit. For one thing, in peace no regular unit in Great Britain belongs to the same division for more than five years and scarcely ever sees it assembled and, even with territorial divisions, the sentiment would not be enough to provide healthy emulation between its units. It is none the less a most valuable asset and was much utilized by the more thoughtful Divisional Commanders, though not by all.

I come to the last objection to the Cardwell System—the regimental list for the promotion of officers, and in this case the critic is on surer ground. At present the rates of promotion in addition to being very slow are utterly uneven, and generally speaking, the better the regiment the slower the promotion. It must be made clear, however, that bringing in an officer from another regiment to command does not tend generally to slow up the promotion of the regiment to which he is posted. One comes and as a rule another goes. It must be admitted nevertheless that the grievance exists; the critic's solution will be considered in its proper place.

So much for his premises. I have not a great deal left to dispose of but will take his proposals in turn.

The arrangement of our regular infantry into eight or ten groups would involve the creation of enormous group depots. These would

be completely out of touch with six out of seven of their regimental areas, they would be a great expense to initiate and would probably absorb all the savings accruing from the sale of the evacuated depots. The present close liaison between Depot and Territorial unit would cease to exist.

A general list for officers would mean that an officer would have to be qualified at short notice to deal with such contradictory types as the stolid Westcountryman, the dour Northumbrian, the impetuous Irishman, the stockey Welshman, the independent Lancastrian, the nimble-witted cockney and a dozen more. Truly he would have to be an "Admirable Crichton." It would be a gross waste of power using a Highland officer to command a Devonshire battalion. Square men for square holes is true economy. The critic makes a dangerous remark when he says that practically all officers come from the same source. This is distinctly misleading, for although they come from the same stratum of society they come with every imaginable kind of family and property tie. Many would find it impossible to combine service overseas with their interests at home with the obvious result that they would not enter the Service and there can be no compulsion in the matter.

It certainly would be an advantage that all officers should take their turn at service overseas. At present the wealthier officer stays at home and his less fortunate brethren literally, bear the heat and burden of the day. To make the proposal at the present moment, when officers are not easy to get, would be highly inexpedient and would without doubt increase the present shortage of officers. Let us wait until we are well off before we become prodigal with our resources, if we ever do. A general list is no solution and to suggest it as a cure for this difficulty seems to be using a clumsy steam hammer to crack a walnut. A far simpler plan will be suggested.

It is not clear whether our critic would train his Indian drafts at the depot or let the home battalion do so and send them to the depot previous to embarkation. In the former contingency the home battalions would be emasculated and the depots crammed with unwanted men; in the second there would be a waste of time and money sending a draft from, say, Portsmouth to Glasgow and down to Southampton for embarkation.

The proposal is made to overcome the difficulty caused by the difference of establishments of technical units at home and abroad,

and similarly of modern equipment, arms and vehicles, by leaving the units continuously overseas. They would be kept up to strength by drafts. This would mean the death to any sort of connection between home and "foreign" units and would hardly be tolerated by those fated to permanent exile without considerable improvement being made to their conditions of service.

The super-depot would apparently be a Brigadier's command in peace and a Lieutenant-General's in war, for it would have a normal capacity for 3,000 men in the former rising to at least 10,000 in the latter state. In addition this busy officer would have to maintain some thirty territorial battalions, and doubtless a proportion of the other arms as well. Truly a fine command for an Officer Commanding Depot. There is little doubt that if these proposals were adopted our carefully nurtured and highly valuable territorial liaison would cease to exist and there would be little or nothing to take its place.

From what I have written it is plain that I am whole-heartedly against the proposals put forward for the abolition of the Cardwell System. At the same time it is recognized that it has its imperfections and the best method of improving these may now briefly be considered.

It may be assumed that the rough rule of the British Army being equally divided at home and abroad stands good. Great Britain receives many advantages in return for keeping up "The Imperial Police Force." She sends the lads out trained recruits, they return trained veterans, the finest troops in the world. Abroad they police the outskirts of Empire and they act as a strategic reserve in case of national emergency. At the beginning of the Great War India sent her veteran battalions home in numbers, receiving raw territorial troops in their stead. The system delivers the goods, or has so up-to-date. Doubtless, if intelligently adjusted and applied, it will continue to do so.

It is true that the tropical climate and uncivilized state of parts of our Empire will render an European Expeditionary Force unsuitable or partly unsuitable, for service for many years to come, and therefore a variation of establishment must be faced between the home division and those overseas in tropical climates.

As regards expansion in time of war, Lord Kitchener rejected the Territorial Army because he could not count on it for service overseas. Had he known more of it his decision might easily have been different.

In any case, for future emergency the Territorial Army is our real line for expansion and, this being so, it must be kept in the closest possible touch with the problems and training of the day.

My concrete proposals for dealing with the problem are as follows :—

- (1) The strength of the British Army to be determined in the future as in the past by a simultaneous consideration of (a) its colonial necessities, (b) the provision of an adequate expeditionary force, a balance being struck between the two.
- (2) The provision of an adequate supply for colonial and other overseas garrison requirements of the new technical units and weapons, the major portion of these to be found as heretofore by British rather than Indian units, (*e. g.*, R. A. units at present.)
- (3) Liaison between regular depots and territorial army units to be strengthened in every possible way, regular units to be stationed in their own country whenever feasible.
- (4) Territorial units to support and maintain themselves from their own drill halls in war, leaving the depots for the regulars.
- (5) Every area to be allotted the quota of troops of all arms which, in a national emergency it is considered able to raise and maintain, making due allowance for the industrial needs of the nation in such a crisis, *e.g.*, one Territorial Division in war might be able to increase its strength by 40, another by 120 per cent., the new units being made up into new divisions.
- (6) The inequality in officers' promotion to be overcome by introducing the time scale of promotion, as in the Indian Army, but only up to the rank of major, thereafter purely by selection.

It is considered that these proposals where not already in force could be introduced with a minimum of derangement to a well tried system and that they would meet our requirements for many years to come.

NOTES ON APPRECIATIONS, INSTRUCTIONS, OPERATION ORDERS AND MESSAGE WRITING.

By

CAPTAIN O. G. BODY, D.S.O., R.A.

The basis of success in the Staff College Entrance and Promotion Examinations is the art of writing the short Military Essay. This must be constantly practised against time. A clear and concise style in essay writing is the foundation of good order writing.

“If the trumpet sound an uncertain note who will prepare himself for the battle”.

I.—APPRECIATIONS.

1. Information regarding the writing of military appreciations is contained in Training and Manœuvre Regulations, section 25. This section should be read carefully in conjunction with the study of these notes.

In Army Order No. 117 of 1926, this section of Training and Manœuvre Regulations was amended as follows :—

Amendment. Section 25, page 45. For paragraph 4 substitute :—

“4. The writing of appreciations in the accepted logical sequence is a necessity. The general headings and necessary sequence are—

(i) Object.

(ii) Considerations which effect the attainment of this object.

(iii) Courses open.

(iv) Plan.

Unless the object is clearly stated in the opening paragraph, the appreciation is apt to become involved, and the decision—which is the aim and object of all appreciations—shrouded in doubt. From the plan, as given in the final paragraph, any Staff Officer should be able to write the necessary orders.”

This amendment is an important one. In the original edition of T.M. Regulations, 1923, there was no insistence on a definite sequence. The book stated that “so long as the reasoning is logical and leads up to a definite plan, the actual form of an appreciation is of minor importance.” The amendment quoted above now alters this and states definitely that “the writing of appreciations in the accepted

logical sequence is a necessity." The writing of appreciations, therefore, has been brought into line with the writing of operation orders and a set form for each is insisted upon.

2. Examples of appreciations which are to be found in works of military history are not of much value to the student working for the Staff College Entrance or for Promotion Examinations. They deal for the most part with major strategy and follow no set form. The candidate requires to study the type of appreciation which can be completed in the examination room in the usual half or three-quarters of an hour allowed by the examiners. He is also chiefly concerned with questions of tactics.

T. and M. Regulations, section 25, para 2, states :—

"A distinction must be drawn between—

- (1) Appreciations in connection with subjects elaborated in peace time, such as plans of campaign, and
- (2) Appreciations of minor strategical and tactical problems in the field, which in the case of minor tactical problems, may not even be committed to paper.

"In the former, rapidity of compilation is immaterial, every known or surmized factor, however slightly it may bear on the situation, must be considered and recorded, since future developments may materially alter its importance".

"In the latter, rapidity is generally all important, and the time available will seldom admit of all factors being recorded, though they all should receive consideration."

The former type of appreciation may be dismissed from consideration for examination purposes. It is the latter type, concerning problems of minor strategic and tactical importance, with which we are concerned; the type which in practice would seldom be committed to paper. Section 25 T. and M. Regulations is, however, chiefly written with an eye to the former type, and the directions given regarding form, etc., are rather difficult to adapt to examination requirements. The list of factor headings under para. 7 is certainly more suited to major strategy than to minor tactics, and it is the latter type of problem with which the student is confronted in the examination room.

3. Time is such an important consideration in the examinations, that students will be well advised to get into the habit of a definite drill regarding form, headings, etc. This should come just as naturally to them as heading, dating, opening, closing and signing a letter

of private correspondence. There is not time in an examination room to sit and think about the correct sequence of paragraphs, etc.

Keep to the short sentence and the direct military style without any efforts at high flown English.

An appreciation should be definitely grouped under four main headings. Just as an operation order should have its six main headings—Information, Intentions, Method of Execution, Administrative Arrangements, Inter-Communication, and Acknowledge, so an appreciation should be grouped under the four main headings—Object, Factors, Courses Open, Plan. These four main headings should either be set in the margin well clear of the text or set in bold block letters so as to break the text and show distinctly that the appreciation is so grouped. Sub-headings can be set level with the text in running hand, but clearly numbered and underlined.

4. *Heading of an Appreciation.*

T. and M. Regulations, section 25—5 states :—

“The heading (if the appreciation be written) should state what the situation is, and from whose point of view it is being appreciated. The place where, and the time and date on which the situation is being appreciated should also be included.”

This paragraph is often the cause of valuable time being wasted in the examination room. A neat heading which will embrace all this information is difficult to hit upon. “What the situation is” is often hard to state. But *don't waste time over the heading*. The heading of any paper is merely appended so that it can be easily recognised. Time and place are important and must be included. Some such heading as “Appreciation of the Situation by C. C., 1st Infantry Brigade, Givenchy, 1800 hours, 11th April 1917,” will generally suffice. If the C. C., 1st Infantry Brigade, has been given definite orders to attack, then the heading might run “Appreciation of the Situation, by C. C., 1st Infantry Brigade, for attack on Angres, Givenchy, 1800 hours, 11th April 1917”.

Very often the appreciation has to decide what nature the operation is to take, i.e., to defend, to attack, to retire, etc. In this case the nature of the operation cannot be stated in the heading, although T. and M. Regulations states that “what the situation is” should be stated. This is just the type of trouble which worries the candidate who has not had sufficient coaching in examination craft.

Object.

It is very important to state this clearly and concisely. Although it may only consist of one or two lines it requires the most careful consideration. If you mis-state the "Object" the whole of the appreciation is worthless. The "Object" paragraph is the statement of the problem with which you are confronted. It is the question to which the final plan will provide the answer. If it is regarded in this light its importance will be realized.

In major appreciations concerning the inauguration of a campaign the "Object" is usually "to destroy the enemy forces". In a subsidiary theatre of war the "Object" may well be "to protect" a certain locality. In every case a precise definition of the "Object" must be made. Failure to define the "Object" clearly, correctly and precisely has time and time again resulted in failure. The campaign in Mesopotamia provides a good example. At the outset the "Object" in view was vaguely defined. In consequence it was expanded by ambitious and optimistic commanders so as to cover operations much more extensive than were originally intended by the Home Government at whose instigation the campaign was inaugurated.

In minor appreciations, however, the difficulty of stating the "Object" correctly does not usually arise. If acting on higher authority the Object will generally be clearly stated in the instructions received. If asked to write an appreciation in the examination room the "Object" will be somewhere definitely stated in the scheme. It is merely a matter of picking it out. It is nearly always wrapped up and camouflaged somewhere in the narrative. Definite orders may be given to "Capture the village of X", "to secure the crossings over the River Y by 1600 hours to-day", "to hold the enemy east of the line X.....Y until 1800 hours to-day, etc. Each of these instructions might provide an "Object" paragraph for an appreciation.

It is very seldom advisable to give a "primary" and a "secondary" object. If you are considering this necessity it probably means that you are not thinking big enough. Often in appreciations officers make the mistake of choosing an obvious course open and calling that their object. Note the warning which T. and M. Regulations contains. It is important not to confuse "Object" with "Objective". The object can often be stated at the outset, but the selection of the

objectives, to attain that object, may only be possible as the result of an appreciation of the situation."

Again it is seldom advisable to append qualifying clauses to an object. For example an object might be stated as "To secure the high ground south of the **River Test** up to the line of **Freefolk Wood** by 0800 hours, 1st July" to append an explanatory clause such as "so as to enable the 1st Division to commence crossing the river at 0800 hours" would be redundant, and only tend to confuse the main idea.

Considerations which Effect the Attainment of the Object.

This paragraph is usually headed "Factors" for the sake of brevity.

The list of Factor headings given in T. and M. Regulations, section 25—7, is on the whole rather confusing. Time will not permit such a long list of factors to be considered. Such factors as "Relative resources in men, money and material of belligerents". "The political situation", "Character of opposing Commanders". "Supply and Transport" seldom enter into problems concerning minor tactics.

Factors can of course be multiplied *ad lib*, and the inclination to include a large number of factors in order to show the examiner that all points have been considered must be avoided.

Three or four Good Factors are generally sufficient in Minor Tactical Appreciations.

T. and M. Regulations states in section 25—2 in minor strategical and tactical appreciations "rapidity is all important, and the time available will seldom admit of all the factors being recorded, though they should all receive consideration". In the examination room there is not time to record all possible factors, only the more important can be committed to paper.

"Time and Space" should generally be considered early in most tactical appreciations. "Topography" is nearly always important. This latter must be discussed with regard to its suitability to movement and the co-operation of all arms, *e.g.*, "Enemy right flank about X village there are several small woods. Visibility bad. Good approaches for Infantry. Artillery and M. G. support difficult. Cannot make use of my artillery and M. G. superiority on this flank."

Often there are certain limiting factors which, if considered early on, will tend to keep the length of the appreciation within limits.

The most important factors should be considered first. For example, a good and definite deduction from the "time and space" factor may well impose a limit to the area of the map which need be considered under the "topography" factor; whereas if these two factors were considered in the inverse order, i.e., "topography" before "time and space", there might be a tendency to discuss irrelevant matter.

Any disparity in arms and armament generally warrants a special factor, as this will be bound to exert an influence on the ultimate plan. Schemes are often designed to test a candidate's knowledge concerning the tactical handling of up-to-date equipments, and examiners naturally dislike to see their schemes falling "flat". Discussion of artillery, tank, armoured car, or R. A. F. situations under some such paragraph as "Arms and Armament" or "Relative Strengths" is generally sure ground to work upon, and pleases most examiners.

Prior to the amendment of T. & M. Regulations by the issue of Army Order No. 117 of 1926, an appreciation always opened with a statement of the "Position and Relative Strengths of Opposing Forces." This may now have to be set out as a factor, but unless there is a definite deduction to be made, do not consider it.

An appreciation should never resolve itself into an intelligence summary, or a mere statement of information to hand. Each factor should include a definite deduction. It is no use merely stating facts, it is the deductions from the facts which are important. Each factor is really divided into two parts:—

- (1) A statement of the fact.
- (2) A deduction from the fact.

Of course there may be several such statements and deductions under one factor heading.

In working indoor paper schemes, therefore, look through the narrative and see what information is given to you. If you have an important deduction to make from that information, then you have the complete material for a factor. Set down the information and briefly state your deduction. You have now built up a factor. Remember that besides the information contained in the narrative, there is also information contained on the map which deserves consideration in such factors as "Time and Space" and "Topography".

Courses open to both sides.

In considering courses open to both oneself and the enemy, only reasonable and probable courses should be considered. It often

happens that only one course is open or worth considering. If this is the case, well and good. Do not complicate matters by putting up improbable alternatives. Certainly if your argument under the factor headings has been vague and ill-reasoned, you will be left with a variety of "courses open". If your deductions have been sound, then, probably, the whole argument will lead in logical sequence to the one sound course open. Discussion of a variety of "courses open" is often the sign of a badly argued appreciation.

Note the words of T. & M. Regulations, section 25—8: "It is usually better to consider the courses open to one's own side before dealing with those open to the enemy. To reverse this procedure tends towards a surrender of the initiative, when, however, the initiative obviously rests with the enemy, it may be advisable to consider his probable action first."

Plan.

The plan of the appreciation is the final answer to the question which has been stated in the Object paragraph. On it the method paragraph of the operation order is written. The plan should show in broad outline how the troops are to be used. "In sufficient detail for a trained staff officer to be able to draft the orders required to carry it out."

The usual faults in writing the plan are:—

- (1) Not being definite enough.
- (2) Wandering off into details.

The second of these faults is the more common of the two, and there is an inclination to elaborate the plan until it develops into an execution paragraph of an operation order.

In writing a plan of an appreciation more license is allowed than in writing orders. In the appreciations, for example, there would be no harm in stating "I shall attack at dawn tomorrow". It is the business of the trained staff officer to convert "dawn tomorrow" into the exact hour and date, when he is putting the commander's plan into execution.

In considering the "plan" it is often advisable to take each arm in turn and detail its task. This ensures that the part each arm is to play is clearly shown.

Administrative arrangements can usually be omitted from tactical appreciations. The supply of ammunition and the evacuation of

wounded do, however, sometimes warrant a short sub-paragraph in the "Plan."

II.—INSTRUCTIONS.

The decisions of a Commander are notified to subordinate formations in the form of "Instructions" and "Orders".

"In framing orders no unnecessary responsibility should be thrown on subordinate commanders. On the other hand there should be no unnecessary interference with them in carrying out what is required of them. When definite action is required a definite order will be given. But when it is necessary to place a subordinate in a position in which he must act on his own judgment, anything in the nature of a definite order as to methods of action would be out of place, and Instructions should take the place of Orders. These Instructions will give the subordinate all available information likely to be useful to him, and state clearly the object to be attained, but will leave to the discretion of the subordinate the methods to be used for attaining that object. The Instructions will also make clear whether the attainment of the object is to over-ride all or any other considerations. In considering this important point, it must be remembered that great objects cannot be attained by half-hearted measures. In certain cases it will be necessary to issue special Instructions in addition to orders, *e.g.*, to commanders of detached forces."

Distinction between Instructions and Orders.

After deciding on the plan, the commander informs lower formations of the general idea of his plan of operations. This information is usually conveyed in the form of an Instruction. The object of an Instruction is to direct subordinate formations so that they may conform to the general plan of the command, and to give them an indication of the action they are to take, whatever the re-actions of the enemy may be. It expresses intentions and the general idea of the operation. It fixes the first object to be attained, and the subsequent objects to be kept in view, and it defines the respective rôles to be played by the lower formations. It foresees eventualities, and may direct alternative courses of action. It need not necessarily apply to a single day, but may determine the tasks of subordinate formations for a whole period of days. To sum up; it applies to the strategic and tactical conceptions which fix the guiding idea of combined action, and determines the general ends to be attained, without ever laying down the means

to be employed. In principle the instruction is accompanied by an operation order bringing about the execution of the operation in its first phase.

Orders proper, give formal instructions applicable under clearly defined conditions of time and space. The nature of orders is generally understood by all officers and they do not require definition. Instructions are of two kinds, Operation Instructions and Administrative Instructions.

Administrative Instructions deal with such matters as supply, transport, ammunition, medical and other administrative matters. The general outline of these instructions may, if it is considered advisable, be included in the paragraph in operation orders dealing with administrative arrangements, but this paragraph should be kept as short as possible.

Operation instructions are issued by the G. S. Branch for two purposes :—

- (i) Instructions used to indicate the general idea in the mind of a commander, when the situation is not sufficiently clear for him to give definite orders. Such instructions, while defining the object of the superior, give to the subordinate liberty to exercise his command in such a manner as he may himself decide to further or to secure that object.
- (ii) Instructions issued in conjunction with a certain operation order and amplifying it as regards details. They include detailed instructions as to the action of the various arms (artillery, engineers, etc.) especially when the inclusion of these details in the order itself would make it too lengthy and so detract from its clarity.

If the use of an Operation Instruction is fully understood, those whose business it is to communicate the decisions of commanders to subordinate formations will have their task greatly simplified.

In the examination room the candidate is concerned with both Instructions and Orders. He must know what situations warrant orders and when the decisions of higher command are best conveyed by instructions. Officers very often encumber orders with a lot of details which should have been issued in separate instructions, *i.e.*, either in separate operation instructions or in separate administrative

instructions. Again orders are often issued for situations which legislate too far ahead. In this latter instance an order should be issued to cover the initial stage of the operation, and an instruction to indicate the general lines on which the commander hopes to develop the whole course of events.

Instructions may entirely replace orders when situations are obscure. Orders can only be issued when situations are definite and sufficient information is to hand. Cavalry on an independent mission may act on an instruction. A march order may be accompanied by instructions to an advanced guard commander. In protective duties generally Instructions are often employed, as situations are, as a rule, indefinite.

The major strategic conceptions of a commander nearly always necessitate the writing of an operation instruction, especially when an entirely new operation is being initiated. The following example is given.

You are advancing from A to attack an enemy force defending the town of B. A and B are situated three days march apart. Your general intention underlying the whole operation is to bring the enemy to decisive action in the neighbourhood of B. Your immediate intention is to effect the first days approach march. Your general intention underlying the whole operation must certainly be conveyed to subordinate formations but it cannot be stated in operation orders. The enemy is not yet located. The conditions of time and space are too indefinite to enable you to write an order detailing how this intention is to be executed. The General Staff would therefore issue an operation instruction giving the general intention of the commander and the lines on which he expects to develop the whole operation, and would also issue an operation order to bring about the immediate intention of moving the troops from A to C, *i.e.*, the order for the approach march to commence.

The habit of relying on the order on all occasions results in too rigid a control, and the mistake of giving definite orders, under conditions where time and space are indefinite, is very often made.

In some Continental Armies the direction is also recognized. The direction is merely a glorified instruction, and used in connection with major strategy and issued by Supreme Command; and instruction in this case being associated with minor strategy and tactics and used by lower formations.

An Instruction may be headed either Operation Instruction or Administrative Instruction and should be given a number. The Secret Copy No. and date should also be filled in just as in the heading of an order. Below this should be given the list of addresses. It must be remembered that an Instruction is addressed personally to a unit or formation commander, and not sent direct impersonally to the unit or formation as is the case with an operation order. Although it cannot be grouped under main headings or set out in any definite form, it is best to follow as closely as possible the general sequence which is followed in order writing.

If the Instruction is issued in amplification of an operation order, the operation order with which it must be read should be stated immediately under the heading. The operation instruction will necessarily bear a different number to that of the operation order with which it is issued, but the copy number of both, forwarded to a particular unit or formation should if possible be the same, but in certain instances, the orders and instructions may have an entirely different distribution list.

Example of Heading.

Operation Instruction No. 54. Secret. Copy No. 6.

Issued with Operation Order No. 107, 1st September, 1927.

To O. C. 1 Infantry Brigade.

2 " "

3 " "

C. R. A.

C. R. E.

A. D. M. S.

O. C. Div. Train.

III.—OPERATION ORDERS.

Instructions regarding the writing of Operation Orders have previously been distributed between both volumes of F. S. R. A certain amount of valuable information was contained in F. S. R., Vol. I, Chapter XIII "Orders, Instructions and Reports in the Field"; and other information was to be found in F. S. R., Vol. II, Chapter XIV "Orders and Reports". This information has now been collated, brought up to date, and published in one special manual. Instructions for the Drafting of Orders, Instructions, Report and Messages, published with Army Orders for March, 1927. This manual should be regarded as the authority for all matters concerning the compilation of orders.

The preface to this manual reads as follows :—

“The abbreviations and instructions for the drafting of orders, instructions, reports and messages laid down in this pamphlet are for use in the field during training. They supersede the instructions contained in Chapter XIII and Section 97, paras. 1 to 6, F. S. R., Vol. I, 1923 ; Sections 154, 155 and Chapter XIV, F. S. R., Vol. II, 1924 ; Section 13, paras. 1, 14 to 23 and Section 14, paras. 15, 17 to 22 of the Field Service Pocket Book 1926, and the pamphlet “Abbreviated titles for use in the field and during training” issued with Army Order 57 of 1926”.

A great deal of the material contained in the military manuals concerning order writing is, therefore, obsolete, and care must be taken lest out of date matter is unwittingly studied and taken as authoritative.

“Instructions for the Drafting of Orders, Instructions, Reports and Messages 1927” has been taken as the main Authority in the compilation of the notes contained in this Chapter.

In connection with order writing it is also necessary to study the Chapter of F. S. R., Vol. I, which deals with “Inter-communication in the Field”. Unless you are fully acquainted with the means of transmission, etc., you will always go wrong over order writing, their issue, getting them to units in time, etc. The form which orders are to take, i.e., whether verbal, in message form, or in the full form of an operation order, is always influenced by the time at the issuer’s disposal, and the means of communication available. A good knowledge of signal establishments and the capacity of the various signal formations is essential for the writing and issue of orders. Unless a candidate has a fair knowledge of the working of Signals he is very likely to be impracticable in the solution of paper schemes. This fault will be heavily penalized by examiners.

Sequence and form of orders.

In order to facilitate the quick digestion and interpretation of orders it is desirable that the same logical sequence and form should be used.

As regards the form of the order. All the subject matter should be grouped under the six main headings, Information, Intention, Method, Administrative Arrangements, Inter-Communication and Acknowledgement. These six main headings should be set in block capitals so as to break the text. Under these six main headings all paragraphs should be grouped. The headings of the paragraphs should be set

level with the text and written in running hand and underlined. Paragraphs should be numbered consecutively throughout the order. The general form of operation orders recommended is shown in the many examples included in these notes. The six main headings of an operation order will now be discussed in detail.

Heading.

.....Div. Operation Order No.....	Secret.
Ref. Map.....	Copy No.....
	Date.....

The above form of heading must be followed.

If units have been grouped for any special operation, *i.e.*, Advanced Guard, Rear Guard, Flank Guard, Outpost duty, etc., the formation issuing the order will always be set down in the heading. For instance, if the 1st Infantry Brigade is operating as an Advanced Guard with the 1st Fd. Brigade, R. A., 1st Fd. Coy., R. E. and 1st Fd. Amb. attached, the whole would normally be commanded by the C. C., 1st Infantry Brigade, and the orders to the Advanced Guard would be headed :

1 Infantry Brigade Operation Order No.....

It would not be correct to head the order

Advanced Guard, Operation Order No.....

The Advanced Guard of the force will be changing from day to day, and some definite formation must be responsible for filing, diary, etc.

Similarly all such headings as "Detached Force Operation Order No....." are wrong. The order should be headed as issuing from the parent formation engaged, no matter how many other units have been attached for a particular operation.

INFORMATION.

Instructions for the Drafting of Orders, Instructions, Reports and Messages, 1927, Section 6, para. 3—10.

Information.

Regarding the enemy. This paragraph will give a plain statement of facts and deductions from all sources, arranged chronologically so as to give a general picture of the situation. It will include only such information as is necessary to assist recipients in carrying out their tasks. If it is undesirable to mention the source of the

information, the degree of credibility attached to it should be stated, and the time at which it was acquired.

Regarding our own forces. This paragraph may include the intentions of the higher command and of neighbouring formations, arranged logically, *e.g.*, corps situation, divisional situation, brigade situation. The amount of information of this nature which can be published will depend on considerations of secrecy. In this connection the present indicative tense will be used when referring to troops not under command of the commander issuing the order, *i.e.*, "is advancing", "is attacking", etc.

Boundaries. Boundaries laid down by the higher command, *i.e.*, in divisional orders, the inter-divisional boundaries laid down by the corps.

In practice, of course, the information paragraph is very important and must be accurately stated, but in the examination room matters are different, and few marks can be expected for a re-statement of information already given in the scheme. The most important paragraph from an examination point of view is generally the method paragraph, so get on to this as soon as possible.

The information paragraph can often be dismissed as follows :—

Information. As in scheme.

Circumstances may, however, necessitate a full Information paragraph, and many examiners and Instructors are against dismissing the Information paragraph in this manner.

Candidates are, however, nearly always pressed for time in the examination room, and they must be prepared to risk dropping a mark or two if up against a meticulous examiner, in order to devote sufficient care and attention to the more highly marked portion of their work.

In writing an order based on an order from higher authority, it is not sufficient to look through the information of the latter order and decide what to include in your own. Matter which is included in the intention or even the method paragraph, from the point of view of the higher formation, may well have to be repeated in the lower formation order as information. For example, a corps order might state in its intention paragraph :

"The advance of the 1st Corps will be continued tomorrow"—

1st Division *via* Bagshot and Chertsey.

2nd Division *via* Ascot and Staines.

3rd Division *via* Woking and Weybridge.

This would all have to be shifted up into the information paragraph of the divisional order written on receipt of the Corps order.

"If it is not desirable to mention the source of the information, the degree of credibility attached to it should be stated, and the time when it was acquired."

Normally the source of the information will be stated, as "R. A. F. reports up to 1800 hours state", "Reports from armoured cars show that there was no enemy West of the River Test at 0600 hours to-day." If it is not desirable to mention the source then "reliable" will often suffice to show degree of credibility.

Do not forget the importance of mentioning in orders the time at which the information was acquired.

In dealing with orders to detachments which are operating at a distance, the information paragraph is often of increased importance. The information paragraph shows the facts on which the order is based, and a "departure from the letter or spirit of the order is justified, if the subordinate who assumes the responsibility; bases his decision on some fact which could not be known to the officer who issued the order." Hence the importance of a very accurate statement of information in orders to detachments, when communication is likely to be slow and difficult, and the recipient may be compelled to act without referring the matter to the issuer. Whenever a subordinate is likely to be saddled with the responsibility of departing from or varying the orders he has received, on these grounds alone, a more elaborate information paragraph is always indicated.

INTENTION.

Instructions for the Drafting of Orders, Instructions, Reports and Messages, 1927, Section 6, para. 3—10.

Intention.

This paragraph must give clearly and concisely what the commander issuing the order intends to achieve; it must not be merely a repetition of the intention of his superior; it should not exceed the period covered by the order. If it is necessary to state an intention exceeding the period of the order it should be issued personally to those directly concerned.

Alternative plans and conditional statements, depending on developments, should not be given in operation orders, as they are calculated to cause doubt and uncertainty.

In this paragraph the future indicative tense will be used, *e.g.*, "will advance", "will attack", and so on.

The most important thing to notice is that the intention should not exceed the period covered by the order. That is to say, there must be a definite relation between the intention paragraph and the method paragraph, *i.e.*, when the order has been executed, the intention must be fulfilled. To state an intention which the method paragraph fails to cover is a very common fault in order writing. "If it is necessary to state an intention exceeding the period covered by the order it should be issued personally to those concerned." That is to say, an operation instruction as well as an order should be issued. It may also be necessary to issue alternative plans and conditional statements to commanders, and in these circumstances also an instruction should be issued. Operation orders can only be written under definite conditions of time and place.

The beginning of an operation usually demands an operation instruction as well as an operation order for this very reason. For example, take an operation necessitating an approach march of a division to an encounter battle. Probably the intention during the first day's operation is merely to move up the troops from X area to Y area, but the subordinate commanders, in order to act intelligently on advanced guard, outpost, etc., must know the general intention of the commander, *i.e.*, if he intends to accept battle on some selected position, or if he intends to seek battle wherever the enemy is met, etc. In this case the operation instruction might contain the intention.

"To bring the enemy to decisive action in the neighbourhood of Z".

The operation order might contain the intention;

"The 1st Division will move from X area to Y area".

The period covered by the order is merely the move on the first day from X to Y. The necessary orders for bringing the enemy to action cannot yet be given. The only way to overcome this difficulty is to issue an instruction as well as an order.

A good and clear intention covers a multitude of sins. If a commander has made his intention clear, subordinate commanders can act, or, at any rate, ask for any special orders, if necessary orders have been omitted.

Great care must be taken in the wording of all orders, but of the intention paragraph in particular, and choice of words is most important. For example; the following intention would be suitable in an order to a rear guard to take up a defensive position in which to fight a rear guard action.

"1 Infantry Brigade and attached troops will resist the enemy advance in a defensive position astride the road Stockbridge-Basingstoke about the 15th milestone."

The above intention would be far too passive if a commander really intended to stand and fight on a prepared position. In this instance the intention might become.

"1 Infantry Brigade and attached troops will accept battle in a prepared position astride the road Stockbridge-Basingstoke".

To acquire a high standard in order writing frequent and continuous practice is necessary, accompanied by a most critical examination of the details of the order when written.

The following is an example of a bad intention paragraph.

Situation.—An enemy raiding force has crossed your frontier with the object of raiding villages and collecting supplies. You are in command of a mixed force of all arms located in the area to prevent such raids. The following intention was issued:—

"To prevent this raid if possible; if not, to recover the supplies; to locate and attack the enemy's covering force, and cut him off from his line of retreat."

It is conditional and indefinite, and finishes up with a confusion of ideas—"to locate", "to attack", "to cut off the retreat". The recovery of the supplies is for the moment a minor consideration. The raid is already taking place. You must teach the enemy that raiding your territory is too costly in life. Your intention should read "to locate and destroy the enemy's covering force". This should be quite sufficient, and it is a definite intention which shows no confusion of thought.

The following is a further example of a badly worded intention:—

"The main body of the Advanced Guard will attempt to dislodge the enemy from the village of Longstock."

This is too long-winded, and there is no need to state "will attempt" or even to mention the main body.

"The Advanced Guard will attack Longstock."

Or better still :

"The Advanced Guard will capture Longstock."

Method of Execution.

Instructions for the Drafting of Orders, Instructions, Reports and Messages—1927. Section 6, para. 3—10.

Method.

Under this general heading will normally come paragraphs dealing in logical sequence with the tasks allotted to the fighting troops and aircraft, based upon the intention of the commander and in sufficient detail to ensure co-operation.

"The object of an operation order is to bring about a course of action in accordance with the intentions of the commander, and with full co-operation between all ranks." It is the method paragraph which ensures co-operation between all arms and units. If an operation order is regarded as a co-operation order, its purpose will be more generally understood and many faults in order writing will be avoided. If an order is to ring true and carry conviction this paragraph must convey the impression that the commander has used every unit and every weapon at his disposal to best advantage in order to fulfil his intention.

Notice that the method paragraph also contains orders to the R. A. F., and that in all operation orders the R. A. F. are dealt with just as the artillery or tanks are dealt with, i.e., merely as a separate arm. No undue prominence is given to them on account of the fact that they are a separate service.

Arms are generally considered in order of importance, the three chief fighting arms being dealt with first, i.e., Infantry—Artillery—Tanks—then Royal Engineers, etc. The R. A. F. sub-paragraph is normally placed at the end of the method paragraph. The above order applies particularly to problems of attack, defence and outpost. On protection duty cavalry and armoured cars assume increased importance and may have to be considered first under this main heading. Each separate arm should have a sub-paragraph to itself.

In writing the method paragraph of an operation order do not forget the value of tabulation. "With the increased length and complication of operation orders, it may often be advisable to place in appendices, details, such as the hostile order of battle, the composition

of a detachment ; the order of march, or the artillery plan of attack, leaving only the important essentials in the body of the order. Tabulation of such details helps to clearness."

With the small mixed forces employed in minor tactical operations, appendices are not as a rule advisable, except perhaps in the case of march tables. Even a march table, attached separately, is not required with forces below brigade group strength. In the examination room tabulation in the body of the order often tends to brevity and clearness, and the actual arrangement of the matter can often do much to ensure that it is correctly understood.

The following is an example taken from the method paragraph of an operation order :—

Situation. An infantry brigade attack.

Method paragraph. Orders to infantry only are given.

Infantry.

The battalions comprising the 1st Infantry Brigade will attack as follows :—

A Bn. on the right. B Bn. on the left. C Bn. in the centre. D Bn. in reserve.

Boundaries.

A Bn. right boundary A—B—C (all inclusive). Boundary between A and C Bns. D—E—F—(all inclusive to C Bn.). Boundary between C and B Bns. H—I—J—(all inclusive to B Bn.). B Bn. left boundary K—L—M—all inclusive.

Objectives.

A Bn. X Village. C Bn. Z Hill. B Bn. Y Wood.

Zero hour.

Attacking Bns. will commence the attack from the line of the railway at 1100 hrs.

Reserve.

D Bn. will remain in reserve just south of N Village.

The writer obviously knew how troops were "laid on" in an infantry brigade attack, but had no practice at putting together an order of this sort. Infantry units could well act on this order, but it is not neatly stated, and is involved regarding boundaries, objectives, etc. (As regards boundaries there is seldom any need to detail boundaries for the outer flanks of an attack).

The most confusing part of the above order is, that the arrangement of the objectives is different to the detail of the attacking battalions, *e.g.*, A. Bn. on the right. B. Bn. on the left. C Bn. in the centre. A Bn. X Village. C Bn. Z Hill. B Bn. Y Wood. This is very dangerous. Remember that operation orders are not going to be read in a well ordered office.

The following is suggested as a neater arrangement of exactly the same matter.

Infantry.

1 Inf. Bde. will capture from X Village to Y Wood inclusive.

<i>Left.</i>	<i>Centre.</i>	<i>Right.</i>
C Bn.	B Bn.	A Bn.

Dividing line between Bns.

Right and centre D—E—F—(all inclusive to right.)

Centre to left H—I—J—(all inclusive to centre.)

D Bn. in reserve just South of N Village.

Starting Line.—Line of railway. Zero 1100 hours.

Note. Troops do not form up for an attack in mobile warfare. They cross a starting line at a given hour in that state of deployment which the enemy's fire demands. The most forward elements cross at the hour stated. In position warfare, and in attacks at dawn generally, a forming up line may be ordered. Distinguish between a starting line, a forming up line, and a position of assembly.

Care must be taken not to include in the method paragraph any matter which it may be assumed is well known to trained troops. Matter which is laid down in existing regulations often creeps in. For example, in night operation something as follows is often included in the method paragraph.

“Rifles will not be loaded, but magazines will be charged. No firing will take place without orders. Absolute silence will be observed. No smoking or lights will be allowed”.

All this is included in F. S. R., Vol. II, and it should not be included in operation orders. If troops are untrained and it is necessary to include matters of this kind, it should be given out in the form of a separate instruction.

Candidates are advised to practise writing method paragraphs for all the various types of operation.

ADMINISTRATIVE ARRANGEMENTS.

Instruction for the Drafting of Orders, Instructions, Reports and Messages—1927. Section 6, para. 3—10.

Administrative Arrangements.

Under this heading will come paragraphs giving general instructions as regards arrangements for supply, transport, ammunition, medical services, etc. These paragraphs, which will be framed in consultation with branches of the staff concerned, will be limited to what it is necessary for all recipients of the order to know. Detailed instructions for the services will be issued separately to those directly concerned.

It is not necessary to burden operation orders with long administrative instructions. One short paragraph will generally suffice. This paragraph must not be taken to cover all the administrative arrangements that are necessary to cover the period of the order. It must be limited to what is necessary for all recipients to know. Further administrative instructions will be issued by the administrative staff to those immediately concerned.

In the examination room, if the scheme has obviously been set to test tactical knowledge this main heading will have little importance, and can often be dismissed by "will be issued later". Ammunition supply, ration supply and wounded are the chief considerations in tactical schemes. In the Staff College and Promotion Examinations the candidate's knowledge of administrative questions is generally tested in special papers on this subject, and the administrative arrangements paragraph has little importance in the papers on Training for War or Tactics.

INTER-COMMUNICATION.

Instructions for the Drafting of Orders, Instructions, Reports and Messages—1927, Section 6, para. 3—10.

Inter-communication.

Under this heading will come paragraphs giving all necessary details as regards inter-communication, *e.g.*, where reports are to be sent.

What routes the headquarters of subordinate formations are to follow.

Instructions as to liaison duties with flank formations.

Instructions as to wireless control.

Method of communication to and from the air.

Details of any alternative means of inter-communication.

With the advent of the Royal Signal Corps the importance of this paragraph has greatly increased, and it must be treated far more seriously than heretofore. In examination this paragraph is highly marked and cannot be casually dismissed. This does not mean a long and complicated paragraph.

With troops on the move reports are generally sent to the "Head of the Main Guard" or "Head of the Main Body". With large formations, such as a division, it may be necessary to open report centre *en route*. The proposed moves of the headquarters issuing the order should be mentioned in attack schemes, also the line of advance of the main signal artery or arteries.

The detailing of routes to be followed by subordinate formations applies more to strategy and major tactics than to minor tactics, *e.g.*, Protective bodies, such as Advanced Guards, etc., require to have the routes of their headquarters detailed or it would be impossible to find them with messages or orders. It would, however, be almost impossible to detail the route which a battalion headquarters was to follow in encounter battle, but perhaps possible and advisable to detail its route in a deliberate attack with a limited objective.

Instructions as to liaison duties with flank formations are important when formations are advancing by several roads or in schemes of deliberate attack.

Instructions as to wireless control are seldom necessary in the type of scheme set in examinations. Allotment of wave lengths to the various units and formations is a matter for Signals to issue in their own Signals Instructions and should not be given in operation orders.

Under methods of communication to and from the air may be included instructions as to the display of ground strips, establishment of dropping stations, etc.

It may sometimes be necessary to mention the general policy as to whether cable is to be laid or whether runner and visual only are to be relied upon. A defence scheme, in which troops are occupying a covering position for a short time only, might not warrant the laying of cable. In this instance the inter-communication paragraph might state "Communication between units and formations will be maintained by runner and visual". The order "Cable will not be laid" at first sight looks simpler and shorter, but remember the artillery will

in every case want to lay short lines of cable from battery to O. P's. or a battalion commander might well want to lay a short length of cable from his H. Q. to a reserve company. The order "Cable will not be laid" might be read too literally. The above provides a good example of the care which must be taken in wording orders, and shows that many pitfalls into which the uninstructed and unwary may fall.

Always remember that Signals themselves will be issuing the detailed orders on which Signals will act, and that the inter-communication paragraph is merely that portion of these detailed orders which it is necessary for all recipients to know.

TERMINATION OF AN OPERATION ORDER.

Instructions for the Drafting of Orders, Instructions, Reports and Messages—1927, Section 6, para. 3—10.

Acknowledge.

A ————— B —————
Col. G. S.

X. Method of issue and time.

Distribution.

X. Time.

The time is that at which the orders are actually issued from the office of origin.

Distribution.

The distribution list should be in logical sequence, *e.g.*—

Own formations and units.

Own subordinate commanders and services.

Own commander.

Own staff.

Attached troops.

File and War diary.

Formations and units co-operating.

The importance of the "Acknowledge" is shown by the fact that this invariably has a main heading to itself.

The order is always signed by an officer of the General Staff, and in smaller schemes, dealing with the Brigade Group, by the Brigade Major.

Method of Issue and Time.—This may very often be important in the examination room as it will show whether the candidate has a knowledge as to how orders are got out to units, and whether he is practical in his methods. Orders issued by *formations* are as a rule "issued to Signals at ———— hours," or if the order is very important

it may be "issued by S. D. R. at—hours." Units, on the other hand, will generally terminate their orders with "issued by runner at—hours," or "dictated to company commanders at—hours." Normally, with a mixed force of all arms, Signals are entirely responsible for the method of issue.

Distribution and Copy No.

The distribution list should appear on all copies of the order so that recipients may know what formations and units have received copies. Maps and appendices should be marked with the same copy number as the order to which they are attached.

In practice long distribution lists are seldom sent. Distribution lists, made out as suggested above, give the complete order of battle, and this is dangerous in the event of copies of the order falling into the hands of the enemy. Also the copying of distribution lists takes up valuable time. Lists are therefore maintained on which the various addresses are grouped. These lists are issued beforehand to all concerned. Orders, therefore, generally terminate with "issued to list X," or if none of the lists fit the occasion they may terminate with "issued to list X, R. A. F. and Armoured Cars", or "issued to list X less Lincolns". This often saves a lot of time in the examination room; and, unless full distribution lists are specially called for, candidates are advised to use this shortened termination. A normal termination to orders to a Brigade Group formation, such as one usually has to deal with in the examination room, would be as follows:—

Acknowledge.

J. J. JONES, CAPT.,
B. M., 1 Inf. Bde.

Issued to Signals 1600 hrs.

Copies to list X.

IV.—MESSAGE WRITING.

Instructions for the Drafting of Orders, Instructions, Reports and Messages, 1927, Appendix "A" must be closely studied in connection with message writing and the preparation of messages for despatch by Signals.

An example of the message form at present in use is also shown in Appendix "B" of that pamphlet.

The message form is used for a variety of purposes, *e.g.*—

1. Orders for minor operations, *e.g.*, a battalion attack.
2. Warning Orders.

3. Reports on situations.
4. Ordinary messages, *e.g.*, requests for fire support, demands for ammunition, rations, etc.

In the examination room a message pad will not be provided, but such orders, reports and messages as would in practice have been sent in message form, should in the examination room be set out in the same form. (That portion of the message form which is for completion by Signals need not of course be reproduced).

In the copy of the message which is prepared by the Staff and handed in to Signals all addressees are included in the To spacing, no matter whether they are to take action or whether they are merely addressed for information. When Signals transmit the message only one unit or formation will appear in the To spacing. For this reason when the sender desires to inform the different addressees that a message has been circulated, he will include this information at the end of the Text. In the delivered message this is the only place where the complete list of addressees will appear. A message will terminate thus ADDSD 1 DIV. 2 DIV. 4 CAV. BDE OR ADDSD LIST X; or if the message requires action from the 1st Div. only and is to be sent to the others for information, it will end thus—

ADDSD 1 DIV. RPTD. 2 DIV. 4 CAV. BDE.

On no account are messages to be addressed to "All units" or is "Addsd all units" to appear at the end of the Text.

In the From spacing the unit or formation from whom issuing should be placed, and not the appointment of the issuing officer, *e.g.*—

From O. C. 1 INF. BDE. is wrong

From 1 INF. BDE. is correct.

The location of the addressee should not be stated in the To spacing, nor that of the issuing authority in the From spacing.

It is very important to have a knowledge of the ordinary abbreviations. The Army List abbreviations of units need not be studied. No examiner can expect a candidate to have these in his mind, but the correct abbreviations for Division, Brigade, Regiment, Battalion, Battery, Squadron, etc., should always be used.

NOTE.—The Operations section is distinguished by the letter O. This distinguishing letter applies to formations higher than the Brigade. Messages issued under the signature of Brigade Majors of Brigades have the letters B. M. as a prefix to the sender's number.

In the body of the message words must be economised. Anxiety to economise words, however, must not detract from the clarity of the order. The following is an example of a bad message. The Infantry Brigade Commander required to see all his unit commanders prior to committing his brigade to action. The message he sent was as follows :—

To	All units.
From	Gen.
Text	Come here.

Nothing could be worse. It is incorrectly addressed. No one knew where to report, and unit commanders would have been quite justified in moving with complete units.

NOTE.—No signal message ever begins “reference your,” on the message form there is a special space for “in reply to”, and this should be used for references.

Warning Orders.

If detailed orders cannot be issued till late in the evening for any action which is required to be taken early next day, great inconvenience will often be prevented by the issue of a preliminary warning order over night. In order to avoid disturbing the rest of subordinates, it may sometimes be advisable, especially when the force is widely scattered, to confine this order to sufficient instructions to enable any necessary preparations to be made, and to issue the more detailed orders next morning.

The preliminary order should state where and when the complete order will be issued.

In theory a warning order is sent whenever general orders for the following day cannot leave before 1800 hours.

A warning order sent in the form of a message should always commence with *warning order* in the text. Troops as a rule require to know the hour at which they will be required to move. Often combined with the warning order there is a summons for unit commanders to attend a conference.

Example.

Warning Order AAA Advance continues tomorrow AAA Adv
Gd A Sqn 10 H. Dorsets B Bty. RHA moves 0700 hrs AAA O C
units will attend conference Bde HQ 2000 hrs to night AAA order
issues 2100 hrs AAA Ack.

THE USE OF ABBREVIATIONS IN MESSAGES, ORDERS, NARRATIVES, ETC.

It is most important to use only the authorized abbreviations in message writing, and in all orders which are to pass by wire.

In written operation orders, however, abbreviations are not so important. In a written order, for example, it may be immaterial as to whether you write 1st Division or 1 Div. ; or whether you head your order 1st Infantry Brigade Operation Order, or 1 Inf. Bde. Operation Order. But if abbreviations are to be used in a written order they must be used correctly and consistently. It is most annoying to see a unit first of all referred to as "1st Field Amb.," and then later in the same order as "1 Fd. Ambulance." Never mix abbreviations in indicating a unit when writing orders. Either give a unit its full title or its correct abbreviated title, *i.e.*, either write 1st Infantry Brigade or 1 Inf. Bde. (1st Infantry Brigade or 1 Inf. Brigade is to be avoided).

If orders are being got out against time, it is most important to use abbreviations, and every surplus word must be cut out to assist in typing and duplication.

In answering questions in an examination paper, *i.e.*, not actually in the form of orders, in setting tactical schemes or in writing narratives, etc., more licence is allowed in using abbreviations. If you look through the tactical schemes set for Promotion and Staff College examinations you will notice all sorts of mixed abbreviations (*e.g.*, 1st Fd. Battery, R. A., 1st Bn. Middlesex Regiment, etc.). Generally speaking in writing narratives, setting schemes, or answering general questions the full titles of units should be stated, but in the examination room where time is all important the full titles of units can hardly be expected from candidates, and yet on the other hand, the full abbreviated titles appear too abrupt. To sum up therefore candidates are advised :

1. In writing messages to be very careful to use the correct abbreviated titles.
2. In writing operation orders and instructions to use either the full title or the correct abbreviated title.
3. In writing narratives or answering general questions use of the full title is correct, but a certain amount of licence is permissible in the examination room, and mixed abbreviations are excusable.

In the narratives of the schemes given in Chapter VI of these notes many mixed abbreviations are used. In the operation orders and instructions an attempt has been made to use either full title or correct abbreviated title.

In the messages, only correct abbreviations have been used.

Orders in Telegraphic Form.

The methods of issuing orders generally recognized are :—

1. To issue a full operation order.
2. To issue orders as a signal message.
3. To issue orders verbally at a conference.

These are the methods which require study for examination purposes.

There is yet one other method of issuing orders for urgent operations which requires separate study, *i.e.*, the issue of urgent operation orders in telegraphic form. This method is becoming increasingly popular and requires constant practice. Its use and application, however, are more a matter for trained staff than for serious study for examination purposes. The method is not mentioned in F. S. R.

The order in telegraphic form is a cross between a full operation order and an order written in message form. It is written without any of the headings or normal spacings and in abbreviated English. This economises space and paper, and for this reason duplication of copies and quick issue are facilitated. Such orders are usually headed Emergency Operations and sent out by S. D. R.

AN A. F. (I) ANNUAL OAMP.

By

MAJOR P. PENN, 2/10TH GURKHA RIFLES.

The 2nd Battalion of the B. B. & C. I. Ry. Regiment held their Annual Training Camp at Neemuch from 22nd November to 3rd December 1927. This article and the notes therein are written with the object of exchanging ideas with other A. F. (I) units on the subject of training, and to bring to the notice of officers of the Regular Army in India what the A. F. (I) is, and what it is meant to do. It is just as well, therefore, before proceeding further, to publish one or two extracts from official books, and so give an idea of what the A. F. (I) is for, what is expected of it, and on what principles it should be trained.

A. F. (I) Regulations paras, relating are :—

“ 85.—The training of the Auxiliary Force will be based strictly on the duties likely to be required of it in the event of an emergency necessitating the calling out or embodiment of the Force under the Act. These duties must differ to a certain extent according to the various conditions ruling in different parts of India.”

“ 86.—Subject generally, therefore, to local conditions, the training of the Auxiliary Force should be confined to—

- (a) Attaining thorough efficiency in the use of the weapons with which armed.
- (b) Reconnaissances and guard duties.
- (c) Attack and defence of localities, such as strong points, bridges, watering places, railway stations, etc.
- (d) The action of escorts to non-combatants, treasure, prisoners, etc.
- (e) Street fighting.
- (f) Technical duties of the unit.”

“ 87.—Training in drill and handling of arms will be restricted within the limits necessary for the proper performance of the special duties of each detachment, but it must be remembered that steady drill for short periods is the surest method of inculcating the spirit of discipline. Proficiency in rifle shooting, march discipline, military hygiene and camp duties must be insisted on for all ranks.”

Training and Manœuvre Regulations, page 10 (for India only) :—

“Units of the Army in India in turn, and all the A. F. (I) are detailed for the preservation of internal order and support of the Civil Power, and the units so detailed should be regularly exercised in the special work likely to fall to them. At the same time it must be remembered that it is impossible to prepare beforehand a scheme suited to every eventuality. The guiding principles should be that the commander of a protecting detachment must keep his command at all times ready for action.

The A. F. (I) are an important and integral part of the armed force in India and their special role is to co-operate with the civil authorities in the maintenance of order. It is important that their tactical training should be such as to suit them for this duty.

The varying conditions under which auxiliary force corps may be employed must be remembered. The duties likely to fall on a corps in a large city would be quite different from those of a mounted corps in a planting district, while the special duties of railway corps would be chiefly those connected with the defence of their railways, *e.g.*, patrolling the line, providing garrisons for railway posts, such as bridges and railway stations, and the manning of guns and machine guns on armoured trains.

It is important to interest the local civil and public authorities in such training, and to arrange from time to time for military duties such as military police battalions to share in such exercise. The A. F. (I) is the medium through which the British non-military inhabitants may be trained to arms and fitted for occasions of emergency.”

It may be observed that the battalion forming the subject of this article is a railway battalion based on Ajmer with outstation detachments as shown on the plan below. The figures represent the strength at stations :—

Each station underlined has a Staff Sergeant Instructor who visits regularly two days a week the smaller stations. Each station has its own small “defence scheme” and is self-contained for arms, equipment and ammunition.

Six months before camp the battalion had no officers who had passed the examination for "Fitness for Command," so opportunity was taken to coach up 5 Majors and get them to pass the examination. This coaching took the form of about ten to twenty individual T. E. W. T.'s and four other T. W. E. T.'s under battalion arrangements in which all Unit Commanders down to Platoon Sergeants took part. The Superintendent of Police and Superintendent, Government Railway Police, also attended, and so the commencement of a liaison was formed. A good start was thus made, and the senior officers of the battalion got into close contact with civil unrest problems and situations. Moreover being examined in the "Fitness for Command" examination by a Board of Senior Regular Officers gave these Field Officers confidence in themselves, and indicated to them the sort of A. F. (I) work that would be expected of them.

As has been said all officers and non-commissioned officers down to Platoon Sergeants attended 4 of these exercises and were practised in the rapid issue of orders and to think in a military sequence of thought :—

Information.

Intention.

Execution.

Administration.

Inter-communication.

Each situation in turn was examined under the eight principles of war, the application of which are just as important in civil unrest as in any other form of military duty.

Without the above mentioned preliminary training it would have been unwise to set out and compile a camp programme based entirely on what is expected of the A. F. (I). Such a programme is given in full (Appendix I) and on a narrative which was attached thereto each Battalion Commander of the day in turn carried on, compiled his own story and ran his own show. He also published battalion orders of the day, issued his own administrative instructions and orders to "fit in" with the scheme and settled Battalion routine to agree with the day's work. This left the C. O. free to act as a director, and to be able to move about, and see everyone at work. It also presented him with an opportunity of gauging the fitness of his senior officers to command a body of troops should the opportunity arise.

The "busy" spirit in camp was excellent and all officers had to think, and then work. The daily routine of a little arms drill, extended order drill and battalion ceremonial drill died its natural death. "Shirtsleeves" was the order of dress for the day.

The inspection by the General Officer Commanding was on the 28th November when the scheme scheduled for that day was carried out, and it is as well to bring to notice para. 118 of A. F. (I.) Regulations, especially the four lines in block capitals:—

"Every unit of the Auxiliary Force will be inspected annually under arrangements made by the officer commanding the district. The inspection should be held at such time and place as may ensure the largest possible attendance, and for this purpose, early notice of the date fixed should be given to the unit. **THE OBJECT OF THE INSPECTION IS TO ASCERTAIN THE FITNESS OF THE UNIT FOR THE DUTIES IT MAY BE REQUIRED TO PERFORM AND TO TEST THE EFFICIENCY OF THE OFFICERS FOR THE DUTIES REQUIRED OF THEM.**" The report of the inspecting officer will be made out on India Army Form I—1145. The remarks of the inspecting officer are confidential and only so much as is considered desirable will be published in the orders of the unit."

The G. O. C. saw the battalion arrive by train at Neemuch station, put the station in a state of defence, actually repair a 50 yards' breach in the permanent way and entrain ready to return to its base or to another "unrest" area. There was no march past. The scheme for this day being organized by the Battalion Commander of the day and issued by him.

The Commissioner spent 24 hours in camp and watched all work on the 30th November. Nothing but good can be the outcome of such liaison, and it is just as well for him to see at work the troops he may be required to use. The Superintendent of Police came into camp and took part in all during the last week. This gave him an opportunity of acting as the liaison officer between the Police and A. F. (I.) and to ascertain the ideas of the senior officers of the A. F. (I.) regarding co-operation between themselves and the Police. The Superintendent of Government Railway Police attended the last 4 days in camp, and took an active part in all work, thus affording him a similar opportunity.

A few observations on the subject of "conferences." They are most essential, and every military matter should be touched on, yet it is noted that the official manuals supply all the necessary information, *e.g.*, all matters for the first day's conference on arrival in camp are laid down in F. S. R., Vol. II, Chapter XIII, paras. 180, 182, 183, 186, and it is just as well to be guided by these manuals in preference to ideas formed on the spur of the moment.

When compiling "conference notes" it would be well to refer to the headings mentioned in Appendix II, "Manual of Operations on the North-West Frontier of India." A conference of all officers under the Director was held on the completion of each day's work, and in addition to constructive criticisms offered at the time the work was actually in progress.

A word or two about the Demonstrations. The first one 10-15 to 11 a.m. on 24th November to the whole battalion, was simple enough and carried out by a body of 12 men representing an escort to ammunition passing through a main street of a town. The remainder of the battalion represented a rioting band and each step of the procedure in conjunction with the Magistrate was explained, demonstrated and discussed and the "why and wherefor" carefully gone into. Disposal of casualties also received due consideration.

The "Model Musketry Training Lesson" was given by the best Staff Sergeant Instructor and just showed how much could be done in 40 minutes.

"Taking over a Public Office" was done by a platoon and represented a platoon arriving and preparing for a tour of duty for 24 hours at a post office. Not such an easy task and reasonably difficult to organize with no previous thought or training experience.

The demonstration of "The Motor Car as a Tactical Unit" was carried out by a section, the remainder of the company being the enemy, the camp cross-roads representing the scene of action. In cases of this sort such points as a man to be detailed as the shadow of the civilian driver are apt to be overlooked unless actually practised.

The "Organization of an Examining Post" was amusing, but nevertheless instructive, and easily within the scope of every member of the A. F. (I.). It represented the entrance to a Cantonment area. The actual "passers by" presented varied opportunities for practice.

The Fire Power of the Infantry Weapon showed :—

- (a) What 6 riflemen can do.
- (b) What 2 men with a Lewis gun can do.
- (c) What 2 men with a Vickers gun can do.

Time was found for two short periods of battalion drill, but full opportunity was always taken when moving formed bodies of troops to exercise them in marching to attention, march discipline, etc.

For the final day's work all officers above the rank of Captain and all Sergeants were made casualties. This formed a successful test for the junior officers and N.C. Os. of the battalion.

The camp was pitched and maintained on a "pukka" perimeter pattern. There were no flies in camp and the Battalion Medical Officer set and maintained throughout an energetic example of preventive measures in camp hygiene. Daily sick was but 3·2 per cent. Admission to hospital 1 per cent., average daily strength in camp 420 officers and 400 men.

APPENDIX I.

2nd Bn., B. B. & C. I. Ry. Regiment, A. F. (I.).
ANNUAL CAMP 1927.

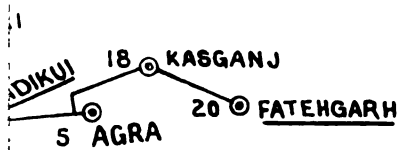
NEEMUCH, 22nd November—3rd December.

Director of Training.—Lieut.-Col. W. S. Fraser, O.B.E., V.D., Commanding, 2nd Bn., B. B. & C. I. Ry. Regt., A. F. (I.).
Assistant to Director.—Major P. Penn, 2/10th Gurkha Rifles, Adjutant, 2nd Bn., B. B. & C. I. Ry. Regt., A. F. (I.).

Date.	Battalion Commander of the Day.	Adjutant to Battalion Commander.	COMPANY COMMANDERS.		
			"A" Company.	"B" Company.	"C" Company.
23rd November.	Major H. Armitstead, M.B.E., V.D.	Lieut. C. Twynam.	Capt. V. N. Rowsell, M.C.	Capt. A. Y. Storrar.	Capt. P. S. Clarke, M.C.
24th "	" N. Marryat, V.D.	" C. Twynam.	Major H. Armitstead, M.B.E., V.D.	Major C. G. Cotesworth, V.D.	" P. S. Clarke, M.C.
25th "	" N. Marryat, V.D.	Capt. P. S. Clarke, M.C.	Capt. V. N. Rowsell, M.C.	Major C. G. Cotesworth, V.D.	" C. M. Rennick.
26th "	" E. C. H. Condon, V.D.	" J. N. A. James.	" V. N. Rowsell, M.C.	Capt. A. Y. Storrar.	" C. M. Rennick.
27th "	" H. Armitstead, M.B.E., V.D.	Lieut. G. E. H. Williams.	Lieut. A. J. Kendrick.	" A. Y. Storrar.	" J. N. A. James.
28th "	" C. G. Cotesworth, V.D.	" G. E. H. Williams.	Major H. Armitstead, M.B.E., V.D.	Major N. Marryat, V.D.	" J. N. A. James.
29th "	" N. Marryat, V.D.	" R. A. Tarleton.	Major H. Armitstead, M.B.E., V.D.	" C. G. Cotesworth, V.D.	Major F. J. H. Sievwright, V.D.
30th "	" F. J. H. Sievwright, V.D.	" R. A. Tarleton.	Major H. Armitstead, M.B.E., V.D.	" C. G. Cotesworth, V.D.	Lieut. G. E. H. Williams.
1st December.	" E. C. H. Condon, V.D.	Capt. J. N. A. James.	Capt. A. Y. Storrar.	Major C. G. Cotesworth, V.D.	Major N. Marryat, V.D.
2nd "	" F. J. H. Sievwright, V.D.	Lieut. P. D. Mitton.	Major H. Armitstead, M.B.E., V.D.	Capt. J. N. A. James.	" N. Marryat, V.D.
3rd "	" F. J. H. Sievwright, V.D.	" P. D. Mitton.	Major H. Armitstead, M.B.E., V.D.	Major C. G. Cotesworth, V.D.	" N. Marryat, V.D.

Day.	Work to be done.	Voluntary A. F. (I.).	Games.	Concert, etc.
1st Day. Tuesday. 22nd November, 1927.	Arrival in Camp. Organisation of the Battalion. Camp Protective Measures and Alarm Posts.			
2nd Day. Wednesday. 23rd November, 1927	Disposal of Company Commanders. N. B.—Lecture on Interior Economy at 11-30 hours. Pay out at 12-00 hours. 14-00 to 14-30 hours .. Officers Conference under Director.	Pool Bull shoot, 200 ^x 14-00 hours to 16-00 hours.	Hockey. 2nd B. B. & C. I. Ry. Regt. <i>Versus</i> 1/3rd Sikh Pioneers.	Wireless Concert. Cinema.
3rd Day. Thursday. 24th November, 1927.	07-00 to 08-00 hours .. Disposal of Company Commanders 09-00 to 10-00 " .. Battalion Issue of Orders exte- cise. 10-15 to 11-00 " .. " Lecture and Demonstration { " A " Company — Demonstra- tion " Fire Power of Infantry Weapons." " B " Company — Model Mus- ketry Training Lesson. " C " Company — Demonstration " Section Fire Orders with Tracer Ammunition." 11-30 to 12-30 " 14-00 to 14-30 " .. Officers Conference under Direc- tor.	Pool Bull shoot 200 ^x 14-00 hours to 16-00 hours. Miniature Range Competition.		Wireless Concert. Cinema.

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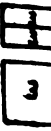
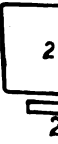


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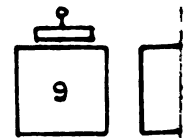
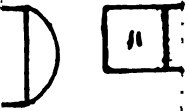
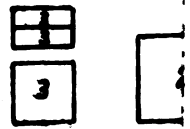
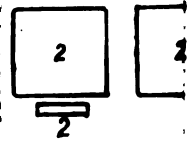
6 INDORE
46 MHOW

MILES = 1 INCH

300 450 MILES



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& C.

P, ANN

Scale 1

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Kanau

Church
1516

2a

Pue

& C.I. RY REGT.

P, ANNUAL CAMP

Scale 1 inch = 1 mile.

2
1

antonment Area sho



Day.	Work to be done.	Voluntary A. F. (I).	Games.	Concert, etc.
10th Day. Thursday. 1st December, 1927.	07-00 to 08-00 hours .. Disposal of Company Commanders. 09-00 to 11-00 " .. Organization of NEEMUCH FORT as a "KEEP." 12-00 to 12-40 " .. Putting piquets out on a march in an affected area. 14-00 to 14-30 " .. Officers Conference under Director.	Battalion Shoot 500x Slow.		Wireless Concert. Cinema.
11th Day. Friday. 2nd December, 1927.	07-00 to 08-00 hours .. Disposal of Company Commanders. 09-00 to 12-00 " .. Clearing up a Civil Area which is being looted. 12-15 to 13-00 " .. Lecture "Internal Security Schemes." 14-00 to 14-30 " .. Officers Conference under Director.			Wireless Concert. Cinema.
12th Day. Saturday. 3rd December, 1927.	Break Camp.			

NOTES ON 'Q' ORGANIZATION FOR WAR, (INDIA).

BY

CAPTAIN G. N. MOLESWORTH, THE SOMERSET LIGHT INFANTRY.

In dealing with the subject of 'Q' organization for war, I have classified these notes under 3 main heads :—

Part I.—*General Remarks.*

Part II.—*Organization in the Division and Cavalry Brigade.*

Part III.—*Organization on Line of Communications.*

PART I.—*General Remarks.*

1. Many years ago a wise man recorded his opinion that of the making of books there is no end and much study is a weariness of the flesh. There are few soldiers to-day who will not cordially endorse this opinion. And since the making of books continues without end and flesh grows daily more weary with study, I have endeavoured in the following pages to put together a few notes which may serve to lighten the labours of candidates for Military Examinations, or those who may be athirst for professional knowledge. It is an unfortunate fact that the details of 'Q' organization for war are contained in many books and it is not always easy to piece the various portions together so as to obtain a clear picture of the whole.

2. In reading these notes it must be remembered that they are merely a statement of the organization for India, and are not a criticism of that organization, nor is any comparison made between the Indian and Home systems. Generally speaking, there is no radical difference between the two systems. In actual practice, certain differences of detail occur. This is inevitable in view of differences of composition in units of the British and Indian Services, and the special conditions of climate and terrain which have to be faced in India. There seems to be an idea that 'Q' organization is extremely complicated and difficult to understand. This perhaps is because the majority of officers have few opportunities to observe the working of 'Q' services in peace. Once the principles of 'Q' organization are grasped, however, they will be found perfectly simple and intelligible, and for the majority of officers there is no necessity to examine minute details. There is much in the following notes which many readers will consider elementary. This is admitted, but on the other

hand, from a perusal of Promotion Examination Papers and Schemes for "Backward Boys", it seems probable that there are not a few officers who may find the information of value.

3. Generally speaking all 'Q' organization can be grouped under two heads :—

(a) Maintenance.

(b) Movement.

The full details of the Q. M. G's. duties in war are contained in Chapter VII, F. S. R., Volume I.

For the purposes of these notes we may define "Maintenance" briefly as follows :—

- (i) *I. A. S. C. duties.*—Supply of rations, grain, fodder, firewood, petrol, oil and lubricants : supply of M. T. vehicles and M. T. stores : Repair of M. T. vehicles.
- (ii) *I. A. O. C. duties.*—Supply of equipment, clothing, boots, tentage, ammunition, explosives and signal stores : Repair of ordnance equipment and horse drawn vehicles.
- (iii) *M. E. S. duties.*—Supply of engineering stores, material for construction, hutting, etc.
- (iv) *I. A. V. C. duties.*—Evacuation and care of sick and wounded animals and supply of veterinary stores.
- (v) *A. R. D. duties.*—Supply of animals of all kinds.
- (vi) Administration and employment of Labour.
- (vii) Canteens and Postal Duties.

Under the heading of "Movement" is included moves of all kinds by road, rail, sea and inland waterway.

4. Thus the Quartermaster General's Staff and Services grouped under the following main heads :—

- (a) Movements and Quarterings.
- (b) Supply and Transport.
- (c) Equipment and Ordnance Stores.
- (d) Veterinary.
- (e) Remounts.
- (f) Military Engineering Service.
- (g) Labour.
- (h) Canteens.
- (i) Postal.

PART II.—*Organization in the Division and Cavalry Brigade.**A.—Divisional Organization.*

1. To deal with the duties referred to in Part I, para. 4 of these notes, the Divisional Commander has the following Staff:—

Staff.

1 A. A. and Q. M. G.

1 D. A. Q. M. G.

Services.

1 D. A. D. O. S.

1 D. A. D. V. S.

2 Executive Veterinary Officers.

Supply and Transport duties are performed by:—

The O. C., Divisional Train.

The Senior Supply Officer (with Div. Train).

2. The units for supply within the Division are as follows:—

(i) *The Divisional Ammunition Column.*—For carriage and supply of 18 pr., and 4·5" How. ammunition.

(ii) *The Indian Pack Artillery Brigade Ammunition Column:* for carriage and supply of 3·7" How. and 2·75" gun ammunition.

(iii) *The Divisional Train:* which includes S. A. A. Sections.

(iv) *The Mobile Veterinary Section.*

(v) 4 *Field Post Offices.*

Of these the Divisional Train, the Mobile Veterinary Section and the Field Post Offices only are 'Q' units. The replenishment of the Ammunition Columns, however, is a duty of the 'Q' Staff.

3. *The Divisional Train.*

(i) As the Divisional Train forms the backbone of 'Q' organization within the Division it will be as well to consider it first. More detailed information on this subject can be obtained from War Establishments (India), Vol. I, and the Field Service Manual of the unit.

(ii) The Train consists of:—

1 Train Headquarters.

6 Train Companies, numbered 1 to 6.

(iii) The Train is provided with Animal Transport and is not yet mechanized.

(iv) The Headquarters consists of :—

An O. C. who is the Chief Executive Officer for Supply and Transport duties with the Division.

A Senior Supply Officer for supply duties.

An Adjutant and Staff.

(v) Nos. 1, 2 and 3 Companies are Divisional Troops Transport Companies. Nos. 4, 5 and 6 are Infantry Brigade Transport Companies.

(vi) No. 1 Company :—

Supplies 1st Line Transport for the I. P. A. Brigade,
A. C., and the D. A. C.

Supplies Transport for the 3 S. A. A. Sections.

(The personnel to handle the S. A. A. is supplied by Infantry Brigades and is attached to this Company):

Carries fodder for these units.

(vii) No. 2 Company :—

Supplies 1st Line Transport, Transport for Baggage and Supplies and Transport for fodder for :—

Headquarters Units.

Signals and Pioneers.

Medical and Veterinary Units.

Furnishes the Supply Issue Section and Bakery and Butchery Sections for all Divisional Troops.

(viii) No. 3 Company :—

Supplies 1st Line Transport, Transport for Baggage and Supplies, and Transport for fodder for :—

Field Artillery Brigades.

Pack Artillery Brigade.

Sapper and Miner Units.

(ix) Nos. 4, 5 and 6 Companies (each) :—

Supply 1st Line Transport, Transport for Baggage and Supplies, and Transport for fodder for :—

1 Infantry Brigade Headquarters.

1 Indian Infantry Brigade.

Furnish a Supply Issue Section and 2 Butchery and 2 Bakery Sections.

(x) Thus to recapitulate :—

(a) Nos. 1, 2 and 3 Companies provide as follows for all Divisional Troops :—

1st Line Transport :

A Divisional Supply Issue Section to handle supplies :

Bakery and Butchery Sections to provide bread and dressed meat for British troops :

Transport for baggage :

Transport for supplies and fodder.

In addition they provide transport for all S. A. A., grenades and fire works.

(b) Nos. 4, 5 and 6 Companies provide as follows for Infantry Brigades :—

1st Line Transport :

Supply Issue Sections to handle supplies :

Bakery and Butchery Sections to provide bread and dressed meat for British troops :

Transport for baggage :

Transport for supplies and fodder.

(xi) In actual practice the organization is elastic. That is to say, when Divisional Troops units are attached to Infantry Brigades, the Train Transport for these units may be attached to the Infantry Brigade Transport Company.

(xii) Generally 1st Line Transport remains with units, but baggage and Supply Sections of this Train are withdrawn to their Train Companies at night.

(xiii) As regards supplies, the Supply Sections of the Train are designed to carry one day's rations and fodder for all personnel and animals of the Division on intermediate operations scale. It should be remembered that the ration includes firewood for fuel. The object of Bakery and Butchery Sections is to provide bread and dressed meat for British Troops. Bakery Sections will frequently (when the Division is concentrated) be withdrawn under orders of the O. C. Train, to bake in some central place. Meat, normally is issued on the hoof.

(xiv) Normally no transport is allotted for tentage which, when operations stabilize, is sent up under arrangements made by the 'Q' Staff.

(xv) Special arrangements have to be made by the 'Q' Staff for canteen supplies and explosives. The latter are generally sent up to units through the S. A. A. Sections of the Train.

4. *The Mobile Veterinary Section.*—This is a small unit designed to take over cases which cannot be dealt with by Executive Veterinary Officers, Farriers, or Veterinary Assistant Surgeons with units. When the Division is not moving, the Mobile Veterinary Section holds minor cases, but normally all serious cases are passed back to the L. of O.

5. *The Divisional Ammunition Column and the Indian Pack Artillery Brigade, A. C.*—As pointed out in para. 3 of Section A. above, these are not 'Q' units and it is unsuitable to deal with their organization here.

6. *Ordnance Arrangements and Salvage.*—The D. A. D. O. S. is not intended to maintain a large stock of stores, equipment, clothing, etc. He has, however, 19 A. T. carts allotted to him (from No. 2 Company of the Divisional Train) for the carriage of Reserve Stores. Beyond this, he must keep his stocks to meet demands as fluid as as possible. 1 A. T. cart is allotted for salvage.

7. *Canteens.*—At present 7 A. T. carts are allotted for canteen supplies.

8. *General remarks on 'Q' arrangements within the Division.*—Generally the system in India follows the Home system.

(a) *Supplies*—

- (i) Rations and fodder are indented for daily by O.'s O. Divisional Troops Supply Issue Section and Infantry Brigade Supply Issue Sections (B. S. O.'s). These indents are based on daily ration strengths from units and are submitted to the Senior Supply Officer with the Divisional Train. The latter, normally, indents on the Railhead Supply Officer. Rations are brought up daily by L. of O. Transport to Supply Refilling Point where they are taken over by the Supply Sections of the Divisional Train. If the Division is at a standstill, arrangements will probably be made to bake all bread and dress all meat at some central place. If the Division is moving, Bakery and Butchery Sections probably remain with their Train Companies. The Supply Sections of the Train after leaving Supply Refilling Point proceed to

meeting points where they are met by guides from units who take them up to the units. After handing over supplies to units, the Supply sections rejoin their Train companies. Normally, as units in India have no supply vehicles with 1st Line Transport, supplies are not handed over until the unit is in a position to commence cooking and distribution.

- (ii) *Petrol, oil and lubricants* are indented for and obtained in the manner as rations and fodder. Allowance has been made in Supply sections for transport for these articles.
- (b) *Ordnance*.—Indents from units are sent through Brigade staffs, or direct in the case of Divisional Troops, to the D. A. D. O. S., who places demands on Ordnance units at Railhead. The stores are sent up on L. of C. Transport.
- (c) *Ammunition and Explosives*—
 - (i) Gun and How. ammunition is applied for through the Headquarters, Divisional Artillery and the 'Q' staff of the Division, who estimate the amount required. The 'Q' staff then place demands on Ammunition Depots at Railhead. The Ammunition is sent up on L. of C. Transport to Divisional Ammunition Refilling Points. It is then taken over by the D. A. C. or I. P. A. Bde., A. C., who in turn, replenish units on demand.
 - (ii) S. A. A. grenades, fireworks and explosives for S. and M. units are similarly supplied. There is no definite Divisional transport allotted for explosives. When the necessity for supply arises, the 'Q' staff arrange for transport to be made available from S. A. A. sections.
- (d) *Veterinary*.—Animal casualties are dealt with firstly by Veterinary Assistant Surgeons or Farriers with units, or by the 2 Executive Veterinary Officers with the Division for units which have no Veterinary personnel. Minor cases remain with units. More serious ones are passed to the Mobile Veterinary Section and either held by them or evacuated to the L. of C. under the orders of the D. A. D. V. S.
- (e) *Replacement of animals*.—This is arranged by the 'Q' staff. Animals to replace casualties being sent up by the Remount Squadron on the L. of C. or at Railhead.

- (f) *Repair and replacement of M. T. vehicles.*—This is an I. A. S. C. responsibility. Any vehicles which cannot be repaired by unit personnel are sent back to the Mobile Repair unit on the L. of C. The functions of this unit are fully dealt with in Part III of these Notes. Replacement is made through advanced vehicle Reception Depots on the L. of C.
- (g) *Repair and replacement of Horsedrawn vehicles.*—This is I. A. O. C. responsibility. D. A. D. O. S. arranges for despatch of repairable vehicles to Ordnance Mobile Workshops on the L. of C. He also arranges for replacement of vehicles lost or irreparable.
- (h) *Canteen supplies.*—The organization of Brigade and Divisional Canteen Sections is now in the melting pot and unit contractors will accompany their units in the field. The ' Q ' staff will arrange for canteen stores to be sent up with I. A. S. C. supplies and for issue to unit contractors under Divisional arrangements. Supply of canteen stores is not an I. A. S. C. responsibility.
- (i) *Postal arrangements.*—Each Brigade and Divisional Troops has a Field Post Office. Mails are sent up on L. of C. Transport to Supply Refilling Point and there issued to Supply sections of the Train for delivery to Field Post Offices.

B.—Organization of the Cavalry Brigade.

1. The system of supply follows that of the Division on general lines.

2. For ' Q ' duties the following staff is provided :—

Staff.

1 Staff Captain.

Services.

1 Veterinary Officer.

1 Warrant Officer.

1 Staff Sergeant

} I. A. O. C.

Supply and Transport duties are performed by the O. C., Cavalry Brigade Train.

3. The units for supply are as follows :—

- (i) *The Cavalry Brigade Ammunition Column.*—This consists of a Horse Artillery Section and an S. A. A. Section. Transport for the latter is supplied by the Cavalry Brigade Train.

- (ii) *The Cavalry Brigade Train.*—This has not yet been mechanized.
- (iii) *The Mobile Veterinary Section.*
- (iv) *The Field Post Office.*

4. *The Cavalry Brigade Train.*

(a) The O. C. is also Brigade Supply Officer.

(b) The Train consists of—

A Headquarters.

A Supply Issue Section.

2 Bakery Sections

2 Butchery Sections.

A Baggage Section (Transport).

A Supply Section (Transport).

(c) The Train provides 1st Line Transport (Pack and L. G. S. wagons) for all units of the Cavalry Brigade. It also provides drivers and animals for unit vehicles of the Cavalry Field Ambulance.

5. *General remarks on 'Q' arrangements within the Cavalry Brigade.*

- (i) As already stated, the general system follows that of the Division.
- (ii) The Cavalry Brigade Train draws supplies, etc., direct from S. R. P.
- (iii) Four A. T. carts are allotted to Cav. Bde. H.-Q. for reserve ordnance stores.
1 A. T. cart is allotted for canteen stores.
- (iv) As regards ammunition of all kinds, grenades, fireworks and explosives, the Cavalry Brigade Ammunition Column draws direct from A. R. P. It should be noted that for the Cavalry Brigade the S. A. A. sections are divorced from the Train and form part of the Ammunition Column.

PART III.—'Q' Organization on the L. of C.

1. 'Q' organization within the Division and Cavalry Brigade is comparatively simple. L. of C. organization is more difficult to comprehend by reason of its complexity and the enormous organization which the Q. M. G. controls. Once more I would refer to paras. 3 and 4 of Part I of these notes, which show the main headings under which the responsibilities of the Q. M. G. are classified. For the sake

of simplicity I will divide L. of C. organization under the headings of the duties performed by the various 'Q' services and departments. It must be remembered, however, that these services do not work in watertight compartments. They are each a component part of one system which is controlled and co-ordinated by the 'Q' staff. It cannot be said that one service is more important than another, since they are largely inter-dependent. The failure of any one service reflects adversely on the others.

Maintenance.

2. I. A. S. C. duties.

A. The L. of C. Pool of Transport.

- (i) The main backbone of the L. of C. in advance of Railhead is the L. of C. Pool of Transport.

Types of units employed in this unit are:—

M. T. companies.

Camel Transport Companies.

Mule Transport Companies.

Draught Pony Corps.

Hired Transport (country carts, pack mules, donkeys, M. T., etc.).

- (ii) In India no Maintenance Companies exist. Transport units, as above, are allotted to L. of C. as required, in accordance with the nature of the country through which the L. of C. passes. If good roads are available M. T. can be used. If roads are lacking Pack or Draught transport must be used. The Transport Pool is allotted by G. H.-Q. It is controlled and administered by Army H.-Q.

- (iii) The Transport Pool carries supplies and stores of all kinds between railhead and Divisions and Cavalry Brigades in the field. The allotment of transport for any particular type of stores or supplies is made under the orders of the 'Q' staff of the Army concerned.

- (iv) It may be useful to describe briefly some of the units involved in this Pool.

(a) The Light M. T. Company consists of—

A. Headquarters.

4 Sections.

Each section contains 33 lorries, of which 25 are working lorries and 8 are spare. The bulk of M. T., at present, utilize 30 cwt. lorries. Thus the lift of Light M. T. Section is $37\frac{1}{2}$ tons, while the lift of a Light H. T. Coy. is 150 tons. The 8 spare lorries per section must not be taken into any transport calculation as they are only used to replace working lorries under temporary repair. The normal run for M. T. per day is 50 miles, i.e., 25 miles out and 25 miles back.

Normally M. T. should not work on the road more than 5 days per week.

(In the future the existing 4 wheel 30 cwt. lorries may be replaced by six-wheelers. But future organization is beyond the scope of these notes).

(b) *Camel Transport Companies.*—A Camel Transport Company consists of—

A headquarters.

8 Troops.

A camel normally carries 5 maunds. The lift of a Camel Transport Company is 4,125 maunds.

(c) *Mule Transport Companies.*—These may be used for Pack or Draught. They may consist of either 7 or 8 troops.

(d) *Draught Pony Corps.*—No Government Pony Corps exist at present, but their employment is always a possibility. They are an unsatisfactory form of transport.

(v) Before leaving the question of transport the question of Medical Transport may be touched on.

(a) The I. A. S. C. Supply Bullock Troops for Field Ambulances. They also supply Bullock Troops for British and Indian Staging sections (on L.'s of C. where no motor road exists) and Casualty Clearing Stations. These Bullock Troops are only "Ambulance Transport." That is to say, they provide bullock tongas for the carriage of sick and wounded. They do not carry stores, baggage or supplies.

(b) The I. A. S. C. Supply M. T. Companies which form part of Motor Ambulance Convoys, which are L. of C. units. These M. T. Companies provide "Ambulance Transport" which is distinct from transport for baggage, stores and supplies.

- (c) It must be understood that neither Bullock Troops nor M. T. Companies form any part of the L. of C. Transport Pool.

B.—Supplies.

(i) The Supply units employed by the I. A. S. C. on L. of C. are as follows :—

(a) *H.-Q. Supply Depot Companies.*

Supply Depot Headquarters.

Supply Depot Sections.

These work at main and advanced Bases.

(b) *Supply Tally Sections.*

Supply Workshop Sections.

For work at main and advanced Bases as required. The Supply Workshop Sections are only for carpenters, tinsmith's work, etc., in Supply Depots and have no connection with any repair of equipment or M. T. vehicles.

(c) *Railhead Supply Detachments* : for supplying troops passing through railheads.

(d) *Local Purchase Sections* : for local purchase when required.

(e) *Cattle Depot Headquarters.*

Cattle Depot Sections.—To take over cattle, sheep and goats from contractors and hold them for issue as required. A Cattle Depot Section is capable of dealing with 3,000 animals. A Headquarters is allotted to control 4 or more Depots (i.e., 12,000 animals or over).

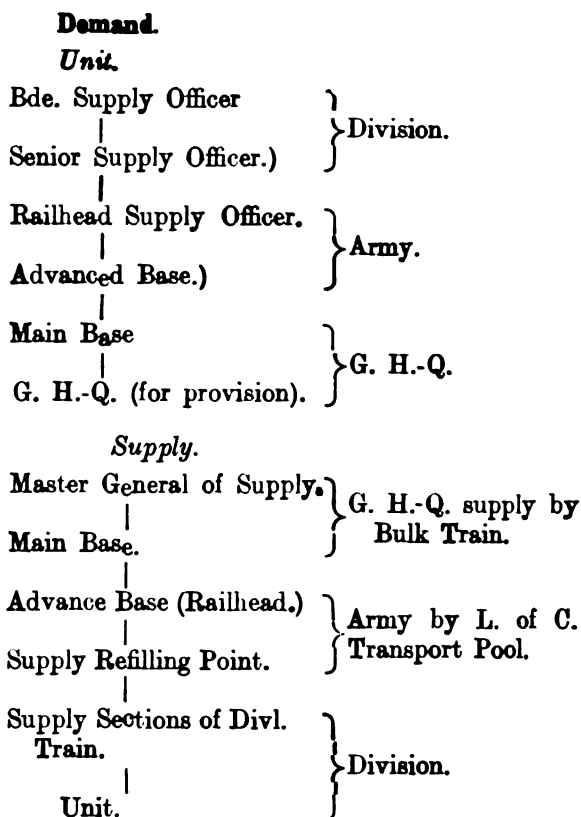
(f) *Supply Sections.*

Butchery and Bakery Sections : for allotment to posts on the L. of C. as required.

(ii) In India elements of distance and climate, and the absence of the Maintenance Company link in the chain of supply, render supply by Pack Train a matter of great difficulty. Pack Train supply is not the normal method, though it may be introduced if circumstances are favourable. Normally supplies (including meat on hoof) are delivered in bulk to Railheads, where their detailed distribution becomes a responsibility of the Army. That is to say, the rations are made up daily and despatched under Army orders on L. of C. Transport to the troops in the field.

Petrol, oil and lubricants are supplied in a similar manner.

(iii) Thus, generally speaking the chain of demand and supply is as follows :—



NOTE.—The Advanced Base may or may not be located at Railhead.

(iv) Supplies are "provided" in the first instance by the Master General of Supply, through his Directorate of Contracts and Farms. M. G. S. organization is outside the scope of these notes. It is sufficient to say that certain commodities are procured in India while others come from overseas through Base Ports.

The question is further touched on under the heading of 'Transportation'.

C.—Repair and Replacement of M. T. Vehicles.

(i) The units engaged in repair and replacement are as follows :—

- (a) *Mobile Repair Units*: for minor repairs which cannot be undertaken by units which have no workshop on their establishment.

- (b) *Heavy Repair Shops*: under Army or G. H.-Q. control for major repairs and extensive overhauls.
- (c) *Advanced Vehicle Reception Depots*: consist of a Headquarters and 3 vehicle sections.

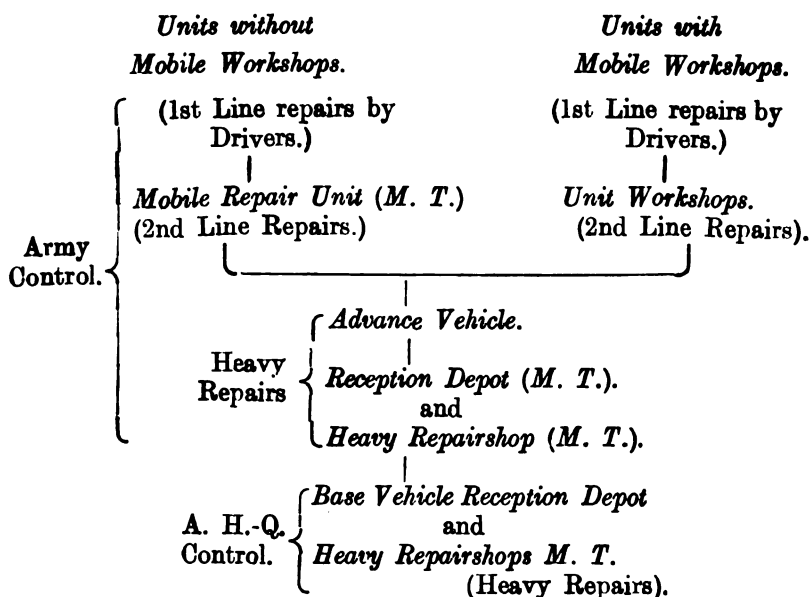
For :—

- (i) Reception, custody and issue of replacement vehicles.
- (ii) Carriage and custody of solid tyres and vehicle equipment.
- (iii) Pressing on of solid tyres.
- (iv) Providing breakdown gangs to retrieve M. T. vehicles.

The unit is designed to perform these duties for 1 Corps.

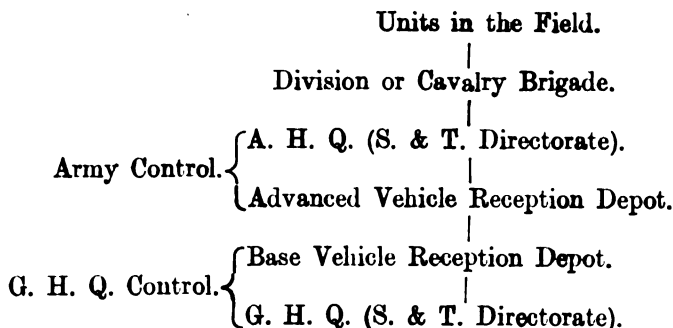
- (d) *Base Vehicles Reception Depots*: to receive vehicles from Heavy Repair Shops, M. T. Collecting Centres in India, and overseas.
- (e) *M. T. Collecting Centres*: for purchase of vehicles in India.
- (f) *Tyre Presses*.—These units are normally attached to other units of the M. T. Service.

(ii) Repair is carried out as follows :—

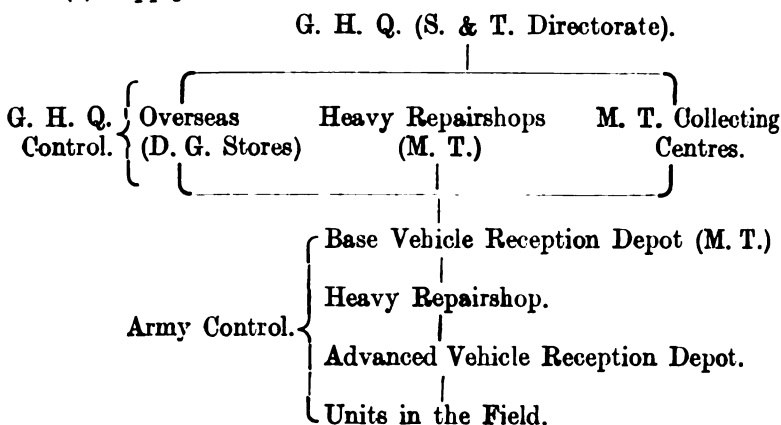


(iii) *Replacement* is carried out as follows :—

(a) *Demand.*



(b) *Supply.*



D.—Supply of M. T. Stores and Spare Parts.

(i) The unit of supply is the M. T. Stores Depot.

(ii) Units in the field indent direct on this Depot, which supplies direct.

(iii) The stocks in the Depot are replaced under orders from G. H. Q., through the M. G. S. and the Director-General of Stores (Overseas).

3. I. A. O. C. duties.

(i) The I. A. O. C. units on the L. of C. are as follows :—

General Stores Company.

Ammunition Section.

Ordnance Mobile Workshop.

Ordnance Base Workshop.

Anti-Gas Mask Repair Workshop.

(ii) *General Stores Company.*

- (a) This consists of a Headquarters and two Sections. Sections can be used on detached duty if necessary.
- (b) General Stores Companies are employed at Advanced Bases where they provide the personnel for "Ordnance Advanced Depots." They hold clothing and stores of all kinds with the exception of ammunition. The stores they hold are known as the "Ordnance Field Park" and are generally based on a fixed number of months supply for troops in the Field. This scale is fixed by G. H. Q.

(iii) *Ammunition Sections.*

These are designed to hold stocks of ammunition of all kinds and are located, as required, at Advanced Bases, Railheads and Posts on the L. of C. They provide the personnel for "Ammunition Depots."

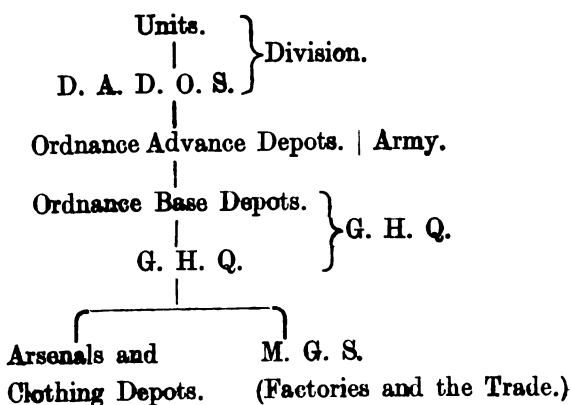
(iv) *Ordnance Mobile Workshops.*

These are generally located at Advanced Bases and undertake minor repairs of equipment, vehicles (other than M. T.), guns and carriages, etc.

(v) *Ordnance Base Workshops and Anti-gas Mask Repair Workshops.*

Are generally allotted to Bases as required.

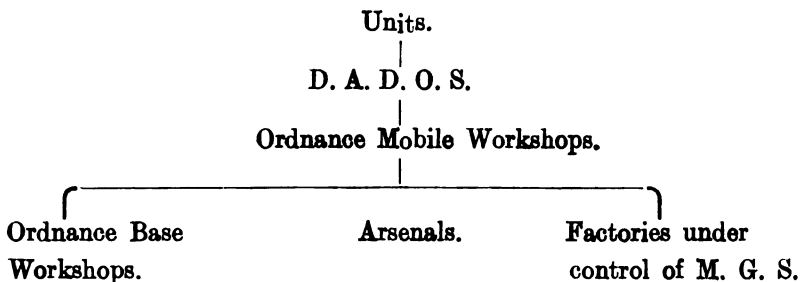
(vi) *For Demand and Supply of clothing and Ordnance Stores* (other than ammunition) the chain is as follows:—



(vii) Ammunition is sent up from Arsenals to Ammunition Depots as required under the orders of G. H. Q. on demands from Armies.

(viii) Explosives are supplied and stored by arsenals and are sent up to Ammunition Depots or Advanced Engineer Parks as required.

(ix) *Repair of equipment*, weapons of all kinds, and vehicles other than M. T., is as follows :—

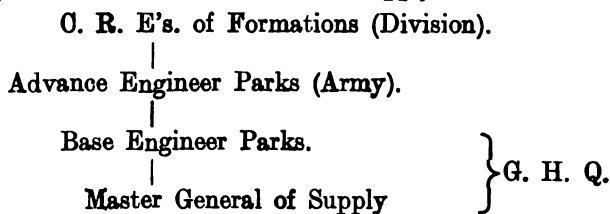


(x) Arsenals, clothing depots, etc., controlled by the I. A. O. C., are replenished under orders of G. H. Q. by the Master General of Supply, through the Directorates of Artillery and Ordnance Factories and Manufacture.

4. M. E. S. duties.

(i) The Engineer-in-Chief, in his capacity as Director of Works, is the Agent of the Q. M. G. He supplies Engineer stores of all kinds.

(ii) The chain of demand and supply is as follows :—



(iii) The duties of the various Engineer Units on the L. of C. are beyond the scope of these notes.

(iv) Normally no transport is allotted to Field Formations for the carriage of Engineer stores. Engineer stores are sent up as required on transport allotted from the L. of C. Transport Pool.

5. I. A. V. C. duties.

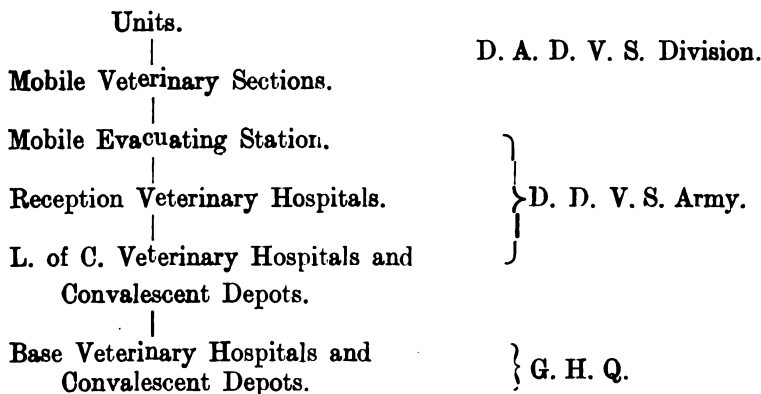
(i) Units employed on the L. of C. are as follows :—

(a) *Veterinary Evacuating Station*.—To deal with animals passing down the L. of C. between Mobile Veterinary Sections and Reception Veterinary Hospitals.

(b) *Veterinary Hospitals*.—To accommodate 250 horses, mules or bullocks.

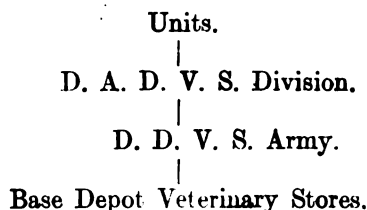
- (c) *Veterinary Hospitals (Camels)*.—To accommodate 500 camels.
 (d) *Veterinary Convalescent Depots*.—To accommodate 500 horses, mules or bullocks.
 (e) *Veterinary Convalescent Depots (Camels)*.—To accommodate 500 camels.
 (f) *Base Depot of Veterinary Stores*.—For supply of medicines and Veterinary Stores.

(ii) The chain of Veterinary Evacuation is as follows :—



(iii) Recovered animals are transferred to the Army Remount Department under orders of G. H. Q.

(iv) Veterinary Stores and Medical Supplies are replenished as follows :—



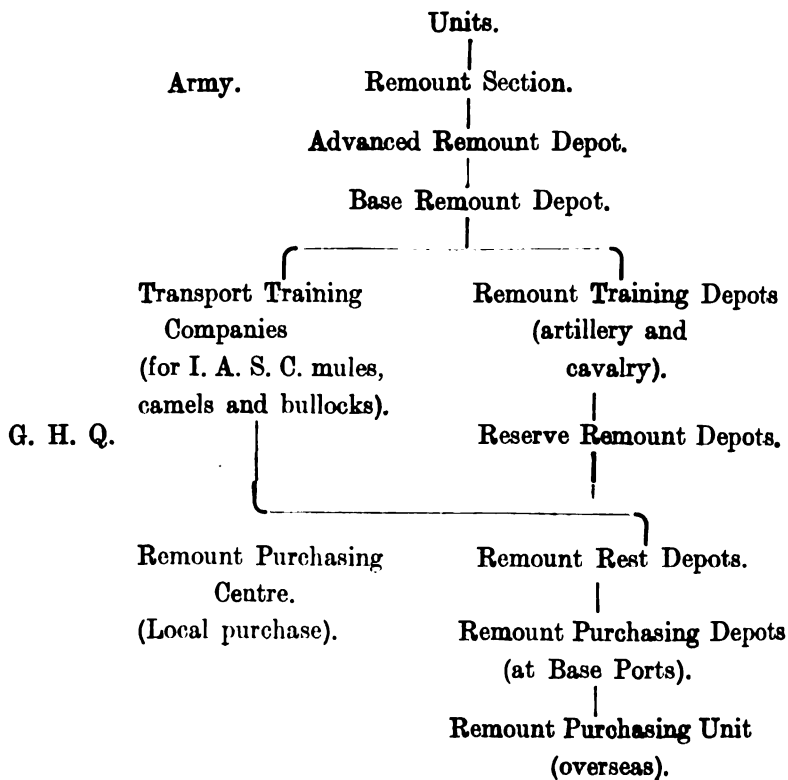
(v) The Base Depot of Veterinary Stores is replenished by G. H. Q. (Director of Veterinary Services) demanding on the Director-General, Indian Medical Service. The latter supplies through Medical Store Depots.

6. Army Remount Department duties.

(i) A. R. D. units and organizations for the L. of C. are as follows :—

- (a) *Field Remount Section* : for employment at Railhead and beyond.

- (b) *Remount Squadron* : to hold 750 animals (horses, mules, bullocks and camels) in lines or 1,000 in paddocks and form the Advanced Remount Depot.
- (c) *Base Remount Depots* : consisting of a H. Q. and 1 or more Remount Squadrons.
- (d) *Remount Training Depots* : for training artillery horses and Pack artillery mules.
- (e) *Remount Training Depots* : for training cavalry horses.
- (f) *Reserve Remount Depots* : to hold 1,500 horses and 1,600 mules.
- (g) *Remount Rest Depots* : to hold 1,000 horses on arrival from overseas.
- (h) *Remount Purchasing Depot* : for imported horses : located at Base Ports.
- (i) *Remount Purchasing Centre* : for local purchase of animals.
- (j) *Remount Purchasing Unit* : for purchasing duties overseas.
- (ii). Supply of animals is as follows :—



7. *Labour.*

(i) Labour is provided by the A. G. and is controlled and administered by the Q. M. G.

(ii) A Labour Company consists of 300 men.

(iii) Labour Companies are allotted to Railheads, Posts on the L. of C. Advanced Bases and Bases as required by G. H. Q.

(iv) Control of Labour is as follows :—

D. A. D., Labour at G. H. Q.

1 Labour Commandant

1 Labour Officer

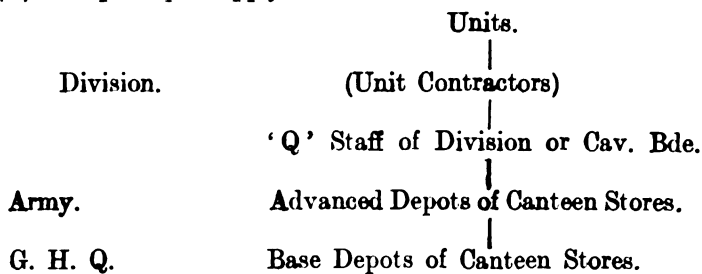
} Army.

(v) Normally Labour Companies at Advanced Bases, etc., are pooled and are allotted as required on demands by Services. Labour Companies are not definitely allotted to Services and Departments.

8. *Canteens.*

(i) Following the liquidation of the A. C. B. (I) the Canteen system is not yet finally decided.

(ii) In principle supply of canteen stores will be as follows :—



(iii) Base Depots will be replenished under the orders of G. H. Q. (Q. M. G.).

(iv) Beyond railheads canteen supplies will be sent up on the L. of C. Transport Pool under arrangements made by 'Q' staff of armies.

9. *Postal.*

(i). Postal arrangements, generally, are made by the Director General of Posts and Telegraphs.

(ii) For military purposes, postal arrangements on the L. of C. are controlled by—

(a) Deputy Director of Postal Services at G. H. Q.

(b) 1 Assistant Director of Postal Services,

2 Deputy Assistant Directors of Postal Services,
with armies.

- (iii) Base Post Offices are allotted to Advanced Bases (Army) capable of dealing with (each) 1 Cavalry Brigade and 2 Divisions.
- (iv) Base Postal Depots are located at Main Bases.
- (v) Beyond railhead, mails are sent up to Field Post Offices on transport allotted from the L. of C. Transport Pool.

Movements.

Moves by Road.

1. The question of transport by road has been dealt with in notes on the transport allotted to field units and formations and the L. of C. Transport Pool.

Tactical moves of troops by lorry are carried out under orders of Armies with transport from the L. of C. Pool or from hired sources.

2. *Moves by Rail.*

(a) Generally the Q. M. G. is responsible for all transportation by rail up to broad gauge railheads.

(b) Railway administrations continue all technical control of Railways in War, and carry out Military demands for transportation.

(c) The following are the main Rail Transportation Units and Formations :—

(i) *Milrail* : consisting of military officers and officials appointed by the Railway Board. This organization co-ordinates military demands and transmits these demands to railways concerned. It is located at G. H. Q. and controls all railway movements through the Movement Control (R. T.) Staff. If necessary advanced echelons of this formation (known as "Advanced Milrail") can be located elsewhere to control movement over certain systems under the general orders of Milrail.

(ii) Whereas all orders for railway transportation are issued by "Milrail" or "Advanced Milrail", detailed work in connection with rail moves is carried out by the Movement Control (Railway Traffic) Staff in close co-operation with local railway authorities. The movement Control (R. T.) staff is directly under the Q. M. G. and consists of—

H. Q. Movement Control (R. T.) Areas :

Movement Control (R. T.) Sections :

Movement Control (R. T.) Offices.

"Offices" are located at large stations and junctions.

"Sections" control two or more "offices": "Areas" control two or more "Sections". Full details of the working of the Movement Control (R. T.) staff are found in the Railway Manual (War) India, and the Manual of Movement (War) 1923.

(iii) The Military Forwarding Organization also works directly under the Q. M. G. M. F. O. sections are located at Railheads and Base Ports. This Organization deals with small consignments addressed to units, formations, individuals or services which cannot be accepted for transmission by the Field Postal Service. It deals with stores of the most varied description such as kits of killed and wounded Officers, men's effects—private parcels, small packets of inter-departmental stores, public comforts, etc. (See Manual of Movement (War) and Railway Manual (War) India).

(iv) Broad gauge railway Operating and Construction Battalions are classified as "Transportation Units." They are, however, provided by "A" and controlled as regards construction by "G".

3. Moves by Sea.

(a) Shipping is taken up for war under the orders of the Q. M. G. by the Principal Naval Transport Officer, who, normally, is the Director of the Royal Indian Marine.

(b) Embarkation duties are carried out by—

Embarkation H. Q. Class I: at large Base Ports.

Embarkation H. Q. Class II: at smaller Base Ports.

(c) Embarkation H. Q. Class I consists of—

Headquarters and Staff.

Troop Section.

Stores Section.

M. F. O. Section.

S. and T. Section.

Ordnance Section.

Veterinary Section.

Medical Section.

Details of the duties of these sections are beyond the scope of these notes.

4. Miscellaneous L. of C. Units controlled by "Q".**(a) Mess Units.**—These comprise—

Mess Inspection Units.

Mess Units for British Officers.

Mess Units for British Other Ranks.

They are located as required at posts on the L. of C.

(b) Overseas Rest Camps.—

Overseas Rest Camps are located at Base Ports and accommodate oversea reinforcements passing through.

Final Notes.

1. A diagram is attached shewing parallel units of "Q" Services in War. It has no connection with any particular operation either past or future, and is merely a rough guide to show general principles. The system is necessarily elastic, and interchange of units is often desirable in practice.

2. Endeavour has been made in these notes to exclude all extraneous details, and particular details in connection with "Q" staff duties. Further details may be obtained from—

F. S. R. Vol. I, 1923.

F. S. P. B. 1926.

Railway Manual (War) India.

Manual of Movement (War) 1923.

War Establishments, India, 1927.

I. A. S. C. Training.

3. It should be remembered that details of "Q" organization for war are always changing. Moreover with the advent of Mechanization certain changes in composition of units and in the chain of replacement, repair and control are bound to occur. But the Broad Principles of Supply in War are unlikely to undergo any considerable modification. The object of these notes is to give a general idea of the application of these principles to Indian conditions.

<i>Division of the Field</i>	<i>Gen. Postal and Labour.</i> Canteen Contractors.	<i>Transportation.</i>
	Post Offices.	
<i>Posts on Railways</i>	Air Coys.	Mess Units. Movement Control (R. T.) Offices. M. F. O. Secns.
<i>Advanced</i>	Post Offices. Depots of Canteen es. Air Coys.	Movement Control (R. T.) Secns. H. Q. Movement Control (R. T.) Areas. M. F. O. Secns. Advanced Milrail. Mess Units.
<i>Main Base</i>	Depot of Canteen es. Postal Depot. Air Coys.	Milrail M. F. O. Secns. Embarkation H. Q. Overseas Rest Camps.
<i>Provision</i>	es Supply for Canteen es.	P. N. T. O.

ORGANIZATION OF THE INDIAN ARMY.

(A Lecture delivered at the *Army Headquarters Staff College*
Course 1927.)

By

COLONEL L. F. ARTHUR, D.S.O., O.B.E.

1. *Introductory.*—This afternoon I am going to try and tell you something about the organization of the Indian Army.

You do not require to go into this subject in very great detail for the purposes of the Staff College examination, as all the papers are set on British establishments, but you should have some knowledge of Indian Army Organization in order to appreciate the military position of India in relation to the forces of other parts of the Empire.

2. *The Army in India and its Evolution.*—In the first place I would recommend you to get hold of a copy of the book "*The Army in India and its Evolution*" which deals with all the important organization measures which have been introduced since the early days of the 17th century (when the forces of the E. I. Coy. were isolated and unorganised entities) up to 1923. It is an official publication and any bookseller will be able to get it for you.

3. *Scope of Lecture.*—In this lecture I propose to confine myself chiefly to the organization on the fighting units of the Indian Army.

Fighting Units.—The fighting units comprise—

21 regiments of cavalry.

19 Indian mountain batteries.

4 corps of Sappers and Miners.

85 active battalions of Indian Infantry (5 employed overseas).

20 Gurkha battalions.

19 Indian infantry training battalions.

9 battalions of pioneers.

3 Pioneer training battalions.

4. *Object of a good Organization.*—In F. S. R., Vol. I, Chapter I, you will find enunciated the object to be aimed at in a good organization.

This object is the defeat of the enemy's armed forces with the minimum expenditure of men, money and material and in the shortest possible time.

This can only be attained by so organizing the army in peace that it can carry out its various functions in war to the best possible advantage.

5. *Role of the Indian Army.*—The conditions under which the army in India may have to operate are very different to those of any other part of the Empire, and these conditions have a very great influence on organization. In addition to the role the Indian army has to play as a component part of the Imperial Army, it has very heavy local and “domestic” responsibilities in the defence of India against external aggression and in the maintenance of internal law and order. We all know that the danger spot is the N.-W. Frontier. We also know that the best defence is offence and therefore that the army in India has to be prepared to fight as a mobile force in a country practically devoid of any proper communications, with a climate, which has extremes of heat and cold, against an enemy who may be organized on European lines or be merely guerilla bands which have to be hunted out of their mountains by small columns. So, as the additions for India to F. S. R., Vol. I, puts it “While general principles of organization are common to all the land forces of the British Empire, there are local modifications in the methods by which these principles are applied to India.

6. *Difficult to keep Indian Organization simple.*—These are a few of the considerations which make it difficult to keep the Indian organization *simple*, and in organization simplicity is a very important point. But in the Indian army there are a whole lot of things which tend to complicate the machine which are not to be found in the British army.

For instance, the Indian army has three grades of officers—British with King’s Commissions and Indians, some with King’s and others with Viceroy’s Commissions. The rank and file is composed of men who differ from each other in nationality, characteristics, habits and temperament, and also in religion. This heterogeneous army has to live and train in peace and fight in war in the same formations with another alien army which differs from it in almost every conceivable characteristic. The difficulty of keeping the organization simple is therefore a very real one.

7. *Difference in Establishments of Indian Infantry and Pioneer Battalions.*—Take again the question of establishments. You

would have thought that it would be possible to have the same Peace establishments for all Indian infantry and pioneer battalions. Yet before the War there were no less than five which varied from 600 to 912 I. O. Rs.

Even now it has not been possible for various reasons to make the Peace establishment of all infantry and pioneer units identical, but they have been simplified to the extent that the Establishments can be easily identified. Thus there is one for all active Indian infantry battalions.

One for all active pioneer battalions (except the 4th Hazara Pioneers) and one for all active Gurkha rifle battalions.

The establishments of training battalions depend on the number of active battalions in the regiment and must therefore vary but they are fixed on a definite proportion, and contain no anomalies.

8. *Organization must be comprehensive.*—It is obvious that an organization which includes as many types of units as possible within its scope makes for efficiency. Exception leads to error and confusion. So a good organisation should be *comprehensive*. In pre-war days the Indian army was full of exceptions. There were localised corps, semi-political corps, cavalry regiments organised on two systems—silladar and non-silladar each fundamentally different, and one cavalry regiment (the Guides) had only 3 squadrons, while all others had four. As you may imagine these exceptions caused immense trouble and confusion during the war, and in the interests of efficiency as many as possible have been removed, though their removal meant stepping on a good many people's toes.

For instance cavalry are now all organised on identically similar lines, viz., regular, and localised corps have gone.

9. *Organization must be elastic to admit of smooth expansion.*—It is naturally impossible on financial grounds to keep an army on a war footing in peace, and in any scheme of military organization it is necessary to keep one eye all the time on the possible necessity of expansion.

The more elastic the organization of the Army in peace the simpler expansion in war.

10. *Methods of Expansion.*—There are two ways by which expansion can be effected—

- (i) Growth by expansion from within.
- (ii) Increase by multiplication.

The first means taking a unit and splitting it up into parts and on those foundations building up new units with reservists, drafts from other units, recruits, etc. This is the quickest method, but it has one serious objection, and that is that during the process of reconstruction both the original and the new unit is useless for any purpose. It is however the quickest method.

The second, i.e., increase by multiplication was the system that was generally employed to expand the Indian army in the war. This was largely due to the fact that no well considered scheme for expansion had been worked out in peace. With few exceptions every unit was a separate entity with no real affiliation with any other. And so the system employed was to 'milk' existing units of a small nucleus of officers, specialists and a few similar essentials and on that nucleus to build up an entirely new unit. Every new unit so formed when it went overseas left behind its own extemporised depot in India and this resulted in an enormous number of independent units scattered about India. These depots had no fixed homes and were frequently moved about from one station to another according to the requirements of the accommodation situation, and their functions consequently were seriously interfered with.

11. *The Training Battalion System.*—This evil has been abolished by the introduction of the training battalion system and the grouping of battalions of infantry and pioneers definitely into regiments.

We call it the training battalion system, but this is simply the term used to denote the system of *depots* definitely organised to supply drafts of trained men in peace and reinforcements in war to the units which are dependent on them. For artillery and signal units there are training "centres" organised on very similar lines and fulfilling a similar role.

12. *Organization of the Training Battalion.*—The organization of the training battalion is based on the number of active battalions in the regiment. Each active battalion has its affiliated training company in the T. B. of the same class composition as the active battalion. An essential feature of the system is that the T. B. is permanently located at its station, which is the regimental centre and has been selected whenever possible, for its central position as regards the class composition of the regiment.

For instance the 10/6th Rajputana Rifles are at Nasirabad, the 10/17th Dogras at Jullundur, and the 10/18th Garhwal Rifles at Lansdowne, and the 10/5th Mahratta L. I. at Belgaum.

The active battalions of the regiment provide the trained personnel required for duty and as instructors.

The tour of duty of those men with the T. B. with a few exceptions is limited to a few years and so there is a continual "turn-over" going on which prevents men getting stale. (For length of tours of duty with the T. B. see T. B. Manual, para. 13.)

The success of the T. B. system is dependent on close co-operation between the T. B. and active battalions and the fostering of a regimental spirit.

The T. B. is both the nursery of the regiments and the reserve centre, and in war it becomes the record office of all mobilized battalions of the regiment.

13. *Expansion.*—It has in it all the machinery necessary for smooth expansion on mobilization according to requirements, certain additional personnel being sent to it by each mobilized active battalion (see F. S. Manual, Indian Infantry, page 19 and W. E. 1927, Vol. IV). The Scheme of Expansion is given in Vol. IV of W. E. India but this is again being revised).

Garrison Companies.—There is one point about this war organization to which I would draw your attention—that is the "garrison company". These are formed on mobilization from pensioned Indian officers and I. O. Rs., whose names are registered in peace, and they have two roles—

- (1) To relieve the personnel of the T. Bs. from all ordinary garrison and routine duties.
- (2) For allotment to commands for duties at stations from which F. A. units have been withdrawn.

The latter will be raised at the T. Bs. in the same way as those it requires for its own use.

15. "*Man Day*" *Scheme.*—The T. B. system however has not hitherto been entirely successful in maintaining active battalions up to strength. This has not been so much the fault of the system as of the fact that when it was introduced nearly all battalions were

very much under strength and T. Bs. have never "caught up" that deficit. Another cause is the restriction imposed by financial procedure. It takes at least 8 months to turn out a trained infantry recruit—it only takes a few minutes to discharge a man or transfer him to the reserve—but the Commandant of the T. Bs. could not enrol a recruit in anticipation of a deficiency which he could foresee, because that might have brought the strength of an active battalion over the authorised establishment. So when a man was discharged his vacancy often remained unfilled until another recruit could be caught, and the active battalion remained short until he was trained. Also owing to certain seasons of the year in India being very much better for recruiting than others it would often take months before recruits could be obtained to make up deficiencies.

(A. I. I. A. 36 of 1927).—In a recent Army Instruction a new system known as the "man-day" scheme was introduced. This lays down that a regiment shall reckon its "Establishment" in "man-days" instead of in men only, *i.e.*, the authorised establishment is the Peace establishment of Indian ranks of all the active battalions of a regiment taken together plus the establishment of the T. B.—all multiplied by 365 or 366. For instance the "man-day" establishment of a regiment with 5 active battalions is $763 \times 5 \times 365$ plus 813×365 .

The Commandant, T. B., has to maintain a running record for the whole financial year (*i.e.*, from 1st March to end of February because the pay of the army for March is paid in April) and to regulate the intake of recruits accordingly. Thus any deficiencies anticipated or actual at one time of the year can be counter-balanced by over-recruitment at other times.

The T. B. Commander is the co-ordinating authority and it is up to him to see that the "man-days" allowed for the regiment as a whole are not exceeded.

16. *T. B. system not applied to Gurkhas and 4th Hazara Pioneers.*—The T. B. system has been applied to all battalions of infantry and pioneers except Gurkhas and the 4th Hazara Pioneers. In their case each battalion has a training company through which all recruits pass. In the event of mobilization two or more of these training companies will be amalgamated to form *Gurkha Group Centres*. The weak feature about this system is that group centre headquarters

will have to be improvised, on mobilization. The training company of the independent pioneer battalion expands into a depot. You will find the system of expansion in both these cases in Vol. IV, War Establishments, 1927.

17. *Cavalry Organization.*—In the case of cavalry the system is different. In peace each regiment is responsible for training its own recruits. In war the procedure is as follows :—

The 21 cavalry regiments are organised in peace in 7 groups—and for each group there is a “centre,” at which one regiment of the groups is always stationed in peace. On mobilization the regiment which happens to be at the centre becomes the depot and record office for the other two, and at the same time has internal security duties to perform. It therefore mobilises 2 squadrons for internal security and forms the third squadron reinforced from the other two regiments of the group, into training squadrons. As all the regiments of a group have the same class composition there is no difficulty on that score. The weak point of the system is that we are definitely using a third of our much reduced cavalry for internal security and depot work.

Organisation of Indian Cavalry Regiment.—As regards the actual organization of an Indian cavalry regiment in peace we still adhere to the organization consisting of—

- (1) Regimental headquarters,
- (2) Headquarter wing of 4 groups, and
- (3) 3 squadrons.

The machine gun group is No. 2 group of the headquarter wing and has 4 Vickers guns, while there is a * Hotchkiss gun troop of 3 H guns in each squadron.

18. *Comparison of British Cavalry Regiment with Indian Cavalry Regiment.*—It will interest you perhaps to compare this organization with the latest organization for cavalry introduced at Home, in view of what I said earlier on the subject of India's peculiar problems. Note the M. G. squadron with its 16 Vickers guns and the elimination of Hotchkiss guns. How would the Home organization suit a squadron acting independently on the frontier? Consider too the problem of ammunition supply for a cavalry brigade with its 24 machine

*It has since been decided that Hotchkiss guns shall be withdrawn from cavalry though one or two may be left for anti-aircraft work.

guns operating in a country where everything may have to come up on "donkeys."

19. *Establishments.—I. I. Battalion.*—Now a few words about our present Peace establishments for Indian infantry and the knotty problem of reserves.

In 1914 the establishment of all Indian infantry battalions earmarked for the field army was 896. I. O. Rs. This was higher than the War establishment, and the result was that even after deducting untrained recruits, sick and so on, most battalions could mobilize without any reservists. By 1921 the Peace establishment had dropped to 806, but this was compensated for by the introduction of the T. B. system, and 806 was still about 60 above the numbers required to mobilise, and all was well. As a result of the Inchcape Committee 1922/23 however, Indian infantry battalions were reduced by 64 sepoys each, *i.e.*, to 742 I. O. Rs. and this meant that the Peace establishment was now lower than the War establishment.

The I. A. Reserve.—Up to this time the Indian army reserve had been a voluntary one. It now became necessary to form a reserve which would be immediately available to enable units to mobilise and be maintained until recruits could be trained. New terms of service were accordingly introduced for infantry in 1923, and for cavalry in 1925 the important feature of which was that for the first time *service in the reserve was made compulsory*. The important terms are *Infantry and Pioneers*—5 years colour and 10 years reserve.

Cavalry.—7 years colour and 8 years reserve.

Artillery. }
(*gunners*). } —6 years colour and 9 years reserve.

S. & M.—7 years colour and 8 years reserve.

As in other things an exception was made in the case of Gurkhas who are still enlisted for 4 years only with the option of extension, and no reserve service, unless they take it on voluntarily. There are political reasons for an exception being made in the case of Gurkhas, which I have not time to go into.

20. *Formation of the New Reserve.*—As units could not now mobilise without a certain number of reservists it was essential that the numbers required to complete to W. E. and as first reinforcements, should be fit to rejoin the ranks immediately. Those required for reinforcements later would have time to do some training before being sent to an active battalion.

So there are two classes in the reserve, class "A" and class "B". Class "A" trains every year, class "B" every two years in both cases for one month. A man cannot remain more than 3 years in class "A". As soon as he completes 8 years combined colour and reserve service he must move on to "B". He spends the remainder of his reserve service, i.e., until he completes a total of 15 years service altogether, in class "B".

I would particularly ask you to note that there is no age limit for class "A" or "B" of the reserve. There was for the voluntary reserve, class I and II. The essential qualifications now are fitness and efficiency, and a strict medical examination takes place every time a reservist comes up for training.

21. *Criticism of Present Terms of Enrolment.*—A good deal of criticism has been directed against the present terms of service in the Indian army, e.g., it is unpopular, the Indian is a long service soldier; he goes to the reserve at his prime; when in the reserve he runs to seed very quickly, etc. The new terms are naturally unpopular compared with the one-sided bargain there used to be.

Under the old terms a sepoy and sowar enlisted for 4 years only but he had the option of remaining on in the service after that up to 21 years and could take his discharge voluntarily at his own request at any time by giving 2 months notice provided his unit was not 10 per cent. under strength. He had no liability for Reserve service, but could go to the reserve if he liked. He thus retained considerable freedom of action once he had completed his first 4 years service, and this was naturally popular. The new terms of service have deprived him of this freedom of action. He must now take on definitely for 15 years and any extension of service must be for a definite period. If he leaves the colours before he has completed 15 years service he *must* go to the reserve if he is fit and efficient.

Naturally a revolutionary measure like this was not introduced without the most mature consideration of all the factors. It was a question of the interest of the army as a whole against that of the individual. Military expenditure had to be reduced. At the same time efficiency had to be maintained, and a properly organised reserve was absolutely essential to make up for the reduced Peace establishments.

22. *Deficiencies in Indian infantry battalion in peace compared with requirements in War.*—On page 18/19 of the F. S. Manual Indian Infantry you will see a table and notes showing how an Indian infantry battalion passes from peace to war establishment and that the estimated deficiency is 70, i.e.—

46 sick and unfit.

19 required to join the T. B.

and 5 the difference between P. E. and W. E.

70

Class "A" of the reserve for an infantry battalion is only 77 so most of that class are used up for the initial mobilization and there are not many left for 10 per cent. 1st reinforcement. Class "B" is 227 or a total reserve per battalion of 304. For Gurkhas the reserve is 100 per battalion only and it is difficult to maintain even this inadequate number. The Gurkha reserve is still a voluntary one, as for various reasons it has not been found possible to apply the new terms of service to Gurkhas.

23. *Recruiting Organisation.*—Now a few words about recruiting. The supreme responsibility for recruiting is vested in the Adjutant-General in India. Under him is a permanent recruiting staff, consisting of 9 recruiting officers and 20 (since slightly reduced) assistant recruiting officers. As most of the martial races live in Northern India, naturally most of the recruiting officers are in the Punjab. Each R. O. has a definite area to exploit, and he is responsible for recruiting all classes found in his area.

The policy aims at keeping in touch in peace time with all classes suitable for the army so that when expansion becomes necessary we shall not have to break new ground nor establish new connections which always take time.

24. On mobilization the recruiting organisation has to expand very rapidly and to work in close co-operation with the Civil officials of local Governments. The steps to be taken have been worked out in great detail and special recruiting regulations for War have been prepared and will shortly be issued.

25. *Class composition based on class squadrons and companies.*—Closely connected with recruiting is the question of class composition. As you probably all know the units of the Indian

army are with few exceptions composed of mixed classes and races on a squadron or company basis. In a few cases, for instance *Trans-Frontier Pathans*, there are class platoons,—but from the point of view of maintenance in peace and expansion in War the class company system has many advantages.

26. *Exceptions Class Regiments.*—The exceptions to the class company composition are—

3 battalions of the 11th Sikhs.

17th Dogra Regiment (3 battalions and T. B.)

18th Garhwal Rifles (3 battalions and T. B.)

The Kumaon Rifles (one of the battalions of the 19th Hyderabad Regiment).

3rd Sikh Pioneers.

4th Sikh Pioneers.

All of which are composed of one class only. There are no exceptions to the squadron class composition in the Indian cavalry.

27. *Artillery, Organisation of.*—I have not said much so far about the organisation of artillery units in India as this generally conforms to the organisation at Home which will be or has been dealt with by other lecturers. The most important modification in the organisation of the horse and field artillery in India is the incorporation in the battery of a very much larger number of Indian drivers than was the case before the war. In 1914 there were only 10 Indian drivers in a field battery. Now a field battery on the higher establishment has—

1 Indian officer, and

54 I. O. Rs.

This increase in Indians was introduced partly for reasons of economy (the Inchcape cuts again) and also in order to have an immediate reserve of B. O. Rs. available in India so that batteries could mobilise and be maintained until reinforcements from Home could arrive. Horse, field, pack and medium batteries were all affected. Thus there are more B. O. Rs. in the P. E. of a field battery than are required in the W. E.

The men though only drivers all belong to the martial classes and are chiefly Sikhs and P. Ms.

There are, of course, 19 purely Indian mountain batteries, the composition of which is nearly entirely Sikhs and P. Ms.

Artillery Training Centres.—To maintain the Indian personnel of R. A. and mountain artillery units there are two artillery training centres, which I have already mentioned. The R. A. T. C. at Muttra and the P. A. T. C. at Lucknow. All recruits whether enlisted at battery headquarters or by a recruiting officer go to these centres for their preliminary training.

28. *Introduction of Indian Ranks British Infantry.*—There is one other innovation since the war to which I have not yet referred, and that is the introduction in 1921 of a certain number of Indian combatants into British infantry units. They consist of 1 Indian officer and 39 I. O. Rs. and are employed as drivers in No. 2 group—the machine gun group of the headquarter wing.

These men all belong to the same classes as are taken for the Indian army. The “depot” or “training centre” in their case is the British infantry training company which is attached to the 10/17th Dogra Regiment at Jullundur.

When a B. I. battalion leaves India the Indian personnel are transferred *en bloc* to one of the incoming battalions.

29. *Indian State Forces.*—The Indian State Forces do not form an integral part of the Indian army, but as in the past it has been the custom for ruling chiefs to place a proportion of their forces at the disposal of the Government of India, in case of emergency it is quite possible that units of Indian State Forces may be incorporated in war formations.

A considerable number of Imperial service troops as they were then called, were used in the war, and under the leadership of British officers, some of them did very good work. Since the war considerable reorganization has been carried out, and they have been classified into three categories.

Class A.—Organized and armed on the same lines as Indian troops.

Class B.—A little inferior to class A in training and discipline, and not organized on modern lines.

Class C.—Mainly militia formations of very little value.

To assist the chiefs in the organization and training of their forces there is a Military Adviser-in-Chief at A. H. Q. and all the

important States have "Military Advisers" and "Assistant Military Advisers" who are officers of the Indian army or R. A. The Government of India grant facilities for training and providing military equipment.

30. *Indianization*.—You will find a chapter in "The Indian Army and its Evolution" devoted to the subject of Indianization.

When Indians were first made eligible for King's Commissions they could get them in two ways—

- (1) By passing through Sandhurst in the ordinary way.
- (2) By special selection from among Indian officers with Vice-roy's Commissions.

The latter are now limited to Honorary King's Commissions, as it was found that the Indian officer who had risen through the ranks was generally too old and not sufficiently well educated to take on the duties of a B. O.

The Indian officer is now only given an Honorary King's Commission as a reward for particularly good service.

There are now 10 vacancies for Indian cadets at Sandhurst every year. Indian candidates compete amongst themselves for these vacancies, and have to be approved by a selection board, the C.-in-C. and the Viceroy. The age limit for Indians is 20. For British cadets 19.

The Indian Military College at Dehra Dun which is run on public school lines provides a certain number of candidates. The College takes 70 boys and the Syllabus is designed to give them the preliminary education necessary for the Sandhurst examination. Some Indian officers are admitted on special terms.

*In 1923 it was decided to Indianise eight units of the Indian army, viz, 2 cavalry, 5 infantry and 1 pioneer. This was intended as an experiment to see if units officered entirely by Indians would be as efficient as others with B. O's.

* The Sandhurst Committee recommended the abolition of this "8 unit system" but it has recently been decided that the experiment should be continued.

NOTES ON JUNGLE WARFARE.

By

CAPTAIN J. W. YOUNG, 2/10TH GURKHA RIFLES.

This publication is intended primarily for the use of British officers who are attached to the Burma military police. It will be understood that, while the principles of war as detailed in F. S. R. remain unchanged, in undertaking campaigns in an undeveloped and uncivilized country as is met with on the frontiers of Burma the armament, tactics and characteristics of the tribes and the nature of the theatre of operations will necessitate considerable modifications in the methods of application of those principles. The modifications referred to hereafter are such as have been found necessary in the operations against these tribes, and the instructions embodied herein, are intended to supplement, and in no way to supersede those contained in F. S. R. and the Training Manuals.

PART I.—*The Country and the People.*

(1) *The Country.*—Burma, the largest and Easternmost Province of the Indian Empire, was finally annexed in 1887. In the initial years only the areas which had been ruled over by the Kings of Burma were administered but as time went on circumstances rendered it imperative for us to undertake the administration of many frontier areas which had previously been under loose tribal law. Other areas still remain unadministered; but in course of time the tendency has been to take over these areas. In the unadministered areas the tribes manage their own affairs absolutely. Whilst the horizon of these primitive peoples was bounded by the distance of the nearest village, and their fighting limited to blood feuds, our policy was to leave them to their own devices. It was only when (as in the case of the Chins and Kachins) they carried out thorough and systematic raids on the villages of the plains, that we were constrained to interfere. There are still important unadministered areas—the Hukong Valley, the Triangle (the land lying between the two streams which form the headwaters of the Irrawaddy River) in the Kachin Hills in the North and North-east, and a large part of the country between Burma on the one side and Assam and Arakan on the other, in the Chin Hills.

The country is extremely mountainous and is densely wooded with tropical vegetation. The roads are at the best mule tracks and much work is necessary to keep them from becoming overgrown.

The climate is very variable depending in degree on the altitude and season. There is generally a very excessive rainfall, and, in the rains, fevers and sores are more prevalent amongst troops than in the dry season, and transport mules are more liable to such fatal diseases as Surra. It may be taken that it is only in a case of grave emergency that operations would be undertaken in the rainy season.

The cold season—the period between November and March—is the season in which operations are usually undertaken. At that time the climate is generally pleasant and the rainfall negligible.

(2) *The People*.—Their fighting characteristics.

It is one of the primary duties of an officer who has been posted to a Frontier battalion, to make himself thoroughly conversant with the characteristics of the various tribes who inhabit the area in which his battalion is stationed, and against whom he may be detailed to proceed with a column.

The few notes given below are far from exhaustive and it is necessary for an officer to read the official Gazetteers in order to amplify his knowledge. Much information can also be extracted from the history of his battalion.

Ambuscades.—All frontier tribes are very partial to ambuscades. With the Chins especially, this form of warfare is preferred to the making of an attack in force. Generations of guerilla warfare have made them adept and most of our losses have been due to sniping and ambushes. Generally the tribesmen possess unlimited patience, and are prepared to wait indefinite periods for a suitable opportunity of inflicting loss on our columns.

They are adepts at crawling into our posts at night ; but are very sensitive with regard to their line of retreat.

Sniping.—The Chin sniper almost invariably takes up his position *below the path* on which our column is proceeding. After firing his shot he is then able to dive down the hill in such a way as to render it practically impossible to shoot him.

All tribesmen are more dangerous to our columns when the latter are *en route* than when they are in camp.

Officers.—In the Chin Hills Operations our losses due to the sniping of officers when on the march were unduly heavy. It is undoubted that the enemy is extremely elated whenever he is successful in shooting

an officer and the effect on the morale of our own troops is not good. An officer operating against these tribes must realise that he is irreplaceable and unnecessary risks should be avoided.

When marching through hostile territory officers should on no account march in company. Officers must wear the same type of head-dress as their men so as to lessen the chances of recognition.

3. *Dealing with Ambuscades.*—Experience has shown that the most successful method of dealing with enemy ambuscades is to make an immediate rush in the direction from which the shots are fired. The tribesmen have a distinct dislike to this form of action and although they may have retained a few guns in reserve, their minds are divided between anxiety as to the security of their line of retreat and the desire to kill the advancing enemy.

When tribesmen take action against our camps, dawn is the favourite time.

The most effective method of dealing with tribesmen who harass our camps is by means of ambushes. This proceeding is far preferable to an increase of sentries.

Plan.—In subjugating these tribes the most satisfactory results have followed the adoption of the plan of ambushing the enemy in preference to allowing him to ambush our columns. In dealing with an elusive enemy the destruction of his crops has often been more productive of results (and less difficult of attainment) than destroying one who will not stand to fight. For example in the Chin Hills Operations the ultimate collapse of the enemy was due to the adoption of this plan. First all combined opposition was defeated. Following this our columns were reorganized into smaller parties which were stationed at points of vantage in the hills. The enemy villages were then destroyed and the tribesmen were compelled by circumstances to take refuge in scattered settlements in the jungles. Having placed picquets on the sites of the destroyed villages our forces then systematically ambushed the enemy paths and cultivations, and searched out and destroyed the hidden stores of grain on which the enemy depended for his sustenance. When the enemy discovered that it was almost impossible for him to move without coming within the effective radius of our ambushes, and that there was no opportunity of cultivating fresh crops, his morale evaporated. With the alternative of starvation or disarmament he chose the latter.

Nagas.—The Nagas have only within recent years become known to us in the military sense. They have proved brave foes who even when they have received heavy casualties are prepared to continue the fight.

Kachins.—Up to the present the Kachins have, as a rule, been incapable of a sustained combined effort. This is due to the lack of influence of their “duwas” or chiefs and the fact that there is no outstanding personality who is able to raise them above their petty feuds. But the Kachin is a worthy fighter and especially when allowed to choose his place and time, he has on countless occasions fought with determination and courage.

A few incidents that occurred during the pacification of the Kachin country are detailed below :—

In November 1886, a band of Kachins entered the stockaded fort at Bhamo by night, and killed 3 sepoy, afterwards setting the barracks on fire.

In May 1888, 400 Kachins attacked the fort at Mogaung. They were defeated after heavy fighting with considerable losses on both sides.

In 1888-89 it was necessary to send out 4 expeditions against the Kachins.

In February 1889, a party of 50 Military Police came in contact with the Kachins at Malin and after losing 2 killed and 10 wounded, were forced to retire and abandon their baggage. A force of 50 British troops, and 150 Indian troops with 2 guns, sent out to exact reprisals, met with strong opposition, and sustained heavy casualties before defeating the enemy.

In 1891 in the Bhamo District, owing to carelessness on the part of a sentry, a party of Military Police lost 2 killed and 10 wounded.

In the Myitkyina District in 1893 the Kachins surprised and burnt down part of Myitkyina and attacked Sima post with a body 500 strong. The operations around Sima lasted 7 weeks and altogether 1,200 rifles were employed and 3 British Officers were killed and 2 British Officers and 102 men were wounded.

In 1914-15 there was a widespread rebellion in the Kachin Hills, in which some severe fighting occurred before it was subdued.

An enemy plan.—One plan which was put into operation by the Chins, with a view to the destruction of our columns when traversing a narrow valley in their country shows great ingenuity. Generally, the valleys are covered with thick jungle grass, which in the dry season is very combustible. The Chins set fire to the grass, and the flames spread rapidly. The first tendency on the part of our column was to retire from the advancing flames to the flank. Fortunately, realizing that the fire was in all probability an enemy ruse, orders were given for the column to hack its way through the burning grass. This saved the situation for it was afterwards discovered that the hills towards which the fire was spreading were thick with the enemy, who had fully anticipated that our column would keep in front of the rapidly advancing fire.

This plan is one which may easily be repeated.

PART II.

The Principles of War and the Plan of Campaign.

In this part is given a summary of the effects of the characteristics of the Burma Frontier tribes, and the country, on the methods of applying the principles of war.

(1) *Maintenance of the Objective.*

Whilst ever holding in view the fact that the ultimate aim is normally the destruction of the enemy's forces, it frequently happens that it is impossible to induce him to collect except by an advance by our columns to a particular locality. In this case the occupation of his country is only a means to an end. In the guerilla war which normally follows the defeat of the enemy, destruction of his crops is an effective way of ensuring his early surrender.

(2) *Offensive Action.*

Tribesmen are extremely susceptible to moral influence, and it is most important that no hesitation, delay or retrograde movement, come to their knowledge. They are extremely quick in interpreting any signs of these, and the results are generally unfortunate. A vigorous offensive, strategical as well as tactical, is always the safest method of conducting operations against this description of enemy. The tribesman has no complicated organization. He requires little transport and can disperse at will. A crushing blow is necessary. Care should be taken not to induce him to abandon a position by too obvious a display of force.

(3) *Surprise.*

Owing to the density of the jungle on the steep hill sides, and the utter impossibility, in most cases, of our troops being able to travel other than on the mountain tracks, and owing to the fact that the enemy is living in the jungle with ample opportunities of seeing without being seen, surprise is extremely difficult of attainment. It is, however, possible by night movements and ruses, to outwit the tribesmen, and if successful, the results are more than proportionate to the effort.

(4) *Concentration.*

The limited size of the columns which can operate in the mountainous and thickly wooded country, the long and vulnerable line of mule and coolie transport which must accompany the column (and which must be defended), the difficulties of communication; the very limited number of roads which at best are but mountain tracks requiring constant toil to maintain them in a moderate condition, the delays due to the impossibility of ferrying a force across the swollen rivers (on many occasions these streams become impassible without warning and in a very short time) are in whole or part responsible for dissipation of strength, and render the concentration of as strong a force as is desirable at the decisive time and place almost impossible of attainment.

(5) *Economy of Force.*

The impossibility of moving large bodies of troops in this kind of country makes it essential that the smallest force compatible with the ability to deal effectively with the enemy should be employed.

(6) *Security.*

The characteristics of the country and of the people make it most essential that steps be taken for the protection of the column when on the march or at rest. Precautions and vigilance should never be relaxed, otherwise the enemy is quick to take advantage of any slackness. Darkness and dawn, when our forces are at rest, are especially difficult periods. Reconnaissance, even in conditions of quiet, is very important, and should invariably be carried out and every endeavour should be made to guard against the possibility of surprise.

(7) *Mobility.*

The nature of the terrain and the slowness and the comparative unsatisfactory nature of coolie and mule transport, greatly restrict the mobility of our troops. Every effort must be made to overcome

this disability. This may on occasion be attained by the judicious sub-division of columns, and by lightening the loads carried by the men and also by improving the tracks and bridges over which the column will move.

(8) *Co-operation.*

The tactical co-operation of all arms engaged, and more especially the co-operation of L. G's, while the infantry is very important. The configuration of the country facilitates this in many respects.

(9) *The Plan of Campaign.*

In any campaign the following factors (with others) must be considered :—

(i) Opposition likely to be encountered, the strength, armament of the tribe, and the possibility of other tribes taking joint action against us.

(ii) The size of the column which can march a reasonable distance in the hours of daylight (normally columns are composed of several self-contained units of about 100 rifles with 2 L. G's. for small operations, but the strengths would of course be modified as found necessary).

(iii) The advisability of operating with two or more columns, moving by parallel or converging routes. This is often most advantageous if the difficulties of inter-communication and supply can be overcome.

(iv) Even when organized resistance has been overcome there is generally a resort to guerilla tactics on the part of the enemy, and this may mean a prolonged occupation of his country. The subjugation of the enemy may generally be accomplished by the destruction of his villages, the systematic ambushing of his paths, and cultivations, and the destruction of his crops, combined with the definite determination to prevent him growing the additional crops necessary to maintain him for the year.

(v) *Rations.*—As Military Police columns have on occasions to disappear as self contained units for many months at a time, the organization of the ration arrangements is most important. Bases must be formed for the supply of future requirements, and a strict adherence to a rationing programme is essential. It is impossible to live on the country for any length of time, and in view of the uncertainties of mule and coolie transport (which are the only kinds usually available) a good margin of safety must be allowed to admit of almost certain delays.

PART III.

*Preparations for Column Operations.*1. *Organization of a Military Police Column.*

The organization of the Burma Military Police Columns is essentially different from that of an army column. The necessity for a large proportion of the men of the Burma Military Police being scattered in frontier outposts, the fact that whenever a column is required the number of effective rifles considered necessary is demanded (and not by Companies, etc.), the fact that single company organization is still in force in the Burma Military Police and the necessity for elasticity in the organization all have their effect on the way in which a column is detailed. Improvisation according to the prevailing circumstances is a constant necessity.

It has been found that the most suitable unit for frontier operations in Burma is 100 rifles with 2 Lewis guns. This unit is in every way elastic and may, of course, be altered as circumstances demand.

When a column is in process of being detailed, the men are carefully selected. If time permits they are put through a course of field training prior to the despatch of the column.

The normal organization of a column of 100 rifles and 2 Lewis guns is as follows :—

No. 1 Echelon A.—Two Platoons	.. 2 I. O's.	66 Ranks
„ B.—Headquarters Wing	.. 1 B. O.	32 Ranks
Total	.. 1 B. O.	98 Ranks
		2 I. O's.

No. 2, No. 1 Platoon.

(a) Platoon Headquarters.

Platoon Commander (Indian Officer).

1 Platoon Havildar.

(b) 4 Rifle Sections (Nos. 1, 2, 3 and 4 Sections).

1 N.-C. O. 7 Rifles each

Total strength of Platoon	.. 1 I. O. and 33 Ranks
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No. 2 Platoon.

(c) Same as No. 1 Platoon (Nos. 5, 6, 7

and 8 Sections) 1 I. O.	33 Ranks
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Total strength Echelon A.	.. 2 I. O's. and 66 Ranks
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No. 3 Headquarter Wing.

Column Commander (1 British Officer).

Quartermaster Havildar (H.-Q. Section Commander).

2 Lewis Gun Sections (Nos. 9 and 10 Sections).

1 N.-C. O. 6 Sepoys each.

Pioneer Section (No. 11 Section).

1 N.-C. O. 6 Sepoys.

Headquarter Section (No. 12 Section).

4 Signallers.

3 H.-Q. Runners.

1 Bugler.

2 Sowars (1 B. O's. 1 Civil Officer's)

Total strength Echelon B.	.. 1 B. O.	32 Ranks
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No. 4.

Total strength :—

Echelon A	.. 2 I. O's.	66 Ranks
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„ B	.. 1 B. O.	32 Ranks
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Total	.. 1 B. O.	98 Ranks
	2 I. O's.	

No. 5 NOTE.

(1) If a third Indian Officer is available the senior one acts as Second-in-Command and is with the H.-Q. Wing.

(2) If Pioneers are not provided the most suitable men can be selected from the Column and will soon become efficient. Their special work is bridge building, road repairs, making rafts and clearing obstacles.

(3) If Chinese mules are used for the Lewis Gun Section the mule carrying the ammunition must be in charge of a sepoy.

(4) A Section Commander and a Second-in-Command must be appointed for each section. Neither should be changed.

(5) Each section must have one trained runner.

(2) *Tents and Tarpaulins.*

Tents are required for British Officers, Indian Officers and the Medical Officer ; but not for the men. In the jungle, tents are cumbersome to load, and, when wet with dew or rain, are unduly heavy

for the transport. The nature of the terrain normally allows of only small camping grounds with few satisfactory sites for tents. In addition, a camp composed of tents may prove unnecessarily conspicuous. The men prefer to make their own *chuppers* (which are rough shelters made of bamboo covered over with branches of trees or bamboo grass). The roofs of *chuppers* are finished with tarpaulins. For this purpose tarpaulins, in the proportion of 1 tarpaulin to three men, should be included in the stores taken. Extra tarpaulins are essential for followers, also for the purpose of covering stores and rations, ammunitions, etc. Roughly 45 tarpaulins are required for a column of 100 men.

(3) *Transport.*

Owing to the absence of roads, and the mountainous nature of the terrain over which Military Police columns are normally called upon to march, the only descriptions of transport available are mule or coolie transport. In the case of mule transport the largest proportion of the mules generally used are Chinese mules.

(4) *Mules.*

The advantages of using Chinese mules are:—

(1) The design of the Chinese saddles is such as to allow of the mules being loaded with comparative ease. (The saddles are constructed in two portions. The load is therefore made fast to the saddle after the latter has been placed on the ground. When loaded the saddle is placed on the mules' back).

(2) The Chinese muleteers are adept at tying and untying the loads. They feed and generally look after their own animals without supervision.

(3) The mules are accustomed to rough fare and to extremely dangerous tracks. They find it possible to accomplish marches over almost any kind of country.

The disadvantages are:—

(1) The muleteers are often impertinent and independent and without an efficient and forceful headman whose orders they will obey, they create difficulties, especially as regards punctuality in the march of the columns in the early morning, and, in camp, as regards mules being allowed to stray as they wish.

(2) The muleteers appear to have a language of their own, and appear to misunderstand orders given in any known language.

(3) The muleteers are inclined to refuse to work without any warning should they feel they have a grievance.

(4) It would be impossible to utilize these men in any operations against the Chinese.

All mules must be inspected and passed as fit for service by a British Officer, prior to their being engaged. When engaging the mules required for a column it is imperative that the British Officer satisfies himself that the mule contractor will provide a competent agent who understands the language of the muleteers, and whose commands will be obeyed. Unless this is done endless trouble will ensue when the column is actually *en route*.

The other points which a British Officer will note as regards Chinese mules are :—

(1) There must be 1 muleteer to 5 mules.

(2) When hiring mules allow 10 per cent. extra for muleteers, kit and rations for muleteers and mules, etc.

(3) That the muleteers have made arrangements as regards providing their own food when on column duty.

The binding up of all loads for Chinese mules should be left to the muleteers.

The muleteer headman should invariably have the order of march explained to him. It must, at the time, be duly impressed on him that gaps in the column due to lack of effort on the part of the muleteers will not be tolerated.

He should also be instructed that the muleteers are to tie up the loads, and have the saddles on their mules ready to load up at a certain hour every morning. Any change in the hour of march will naturally be notified to him in good time.

A Chinese mule carries 120 lbs., *i.e.*, 60 lbs. on each side of the saddle.

(5) *Coolies*.—There are many districts where mules are not available or where for many reasons they cannot be utilized. The only substitute is by means of coolies procured locally.

Coolies are, as a rule, engaged by the Civil Officers, who after estimating the requirements, will normally request the assistance of the local tribal chiefs in enlisting the numbers required.

Sometimes it is possible and advisable to engage some or whole of the coolies required for the whole duration of the operations.

As a rule, however, the coolies are changed at convenient centres, and after having been given their dues, are allowed to disperse.

Whilst accompanying the column they are paid a daily rate, and when discharged from service, they are granted a subsistence allowance (calculated on the basis of a daily march of 12 miles for the return journey) to the original place of enlistment.

A coolie will normally carry 60 lbs. on his back, and 35 lbs. on his shoulder (*i.e.*, a load such as a dhooly, etc.). Normally the loads will be arranged so as to be carried on the back.

The method of calculating the number of coolies required is simple if it may be taken that no rations need be carried for the coolies accompanying the column.

The total weight to be carried, divided by 60, (the weight carried by an individual coolie) gives the number of coolies required (*e.g.*, the weight to be carried is 15,420 lbs. This divided by $60=257$ = number of coolies required).

Should it be ascertained, however, that no rations for coolies are obtainable *en route*, and that the rations must be carried from the base, it is obvious that extra coolies will be required for the purpose. To ascertain the exact number of extra coolies required the "useful load" formula will be adopted.

The total load a coolie can carry is a constant quantity, *viz.*, 60 lbs. If, therefore, part of this load consists of his own rations, the weight of these rations must be deducted from 60 lbs., in order to arrive at the nett weight of column stores the coolie can carry. This nett weight is called "the useful load".

The weight of one day's rations for one coolie may be assumed to be $2\frac{1}{2}$ lbs.

If, therefore, coolies have to carry their own rations for 10 days, the "useful load" per coolie would be $10 \times 2\frac{1}{2}$ lbs.=25 lbs. and this to be deducted from 60 lbs.=35 lbs.

But 257 coolies are required for the column when each carries a useful load of 60 lbs.

Therefore $257 \times 60 \div 35 = 440$ coolies are required for the column, when each coolie only carries a "useful load" of 35 lbs.

It is seen that only 257 coolies are required when no arrangements have to be made to carry their rations. Therefore $440 - 257 = 183$

extra coolies are required when coolies' rations for 10 days have to be carried with the column. It will be further noted that these extra coolies will be employed only for the specific purpose for which they are engaged.

The figures may easily be verified by a cross check as follows :—

Number of coolies required to carry 10 days' rations for 440 coolies at the scale of $2\frac{1}{2}$ lbs. per diem

$$\frac{440 \times 10 \times 5 \times 1}{2 \times 60} = 183.$$

Naturally, owing to local circumstances, the weight of a coolie's ration for 1 day ($2\frac{1}{2}$ lbs.) will vary in districts, as will also the number of days' rations to be carried. The only constant figure is the weight carried (60 lbs.) but the "useful load" is easily ascertained.

PART IV.

Protection.

(1) *Organization.*

The organization must be of an elastic nature. The distances between the units of the column must depend on circumstances and the nature of the country, as must also the distance of the flankers from the main body, the number of flankers detailed, etc.

(2) *Hour of March.*

The daily hour of march should be so arranged as to be as early an hour as possible so as to lessen fatigue due to the sun. By arranging to march at the first sign of daylight there is the additional advantage of having all the men awake and alert at the time when hostile action is most probable. It will be found that in the hills a march of 10 miles per diem is a satisfactory distance, especially if much flanking work has to be carried out. The rate of progress of a column is about $2\frac{1}{2}$ miles per hour if without flanking, and 1 mile per hour with flanking. Delays may also occur through the state of the tracks, accidents to the transport, etc.

(3) *Guides.*

A precautionary measure, which, if possible to carry out will on occasions obviate casualties, is to obtain one or two influential tribesmen from each village *en route*. They are employed ostensibly as guides; but in reality as hostages. In the event of any enemy action being imminent those men, if kept under close observation, would,

willingly, or unwillingly disclose the plot. It is necessary to have these guides marched in an exposed position. It is usual to have one with the Advanced Point. He will be handcuffed, if necessary.

(4) *British Officers.*

On the march, if sniping is at all probable, British Officers should not march together, nor should they sit together at halts. They should not make it a practice to proceed to and with the flankers or Advanced Point unless it is necessary, nor should they normally go shooting, fishing, bathing or wander in villages unarmed and unattended.

These strictures are not intended to deter the British Officer from doing his duty on all occasions ; but it must be borne in mind that the number of British Officers with a column is very limited, that their responsibilities are great, that the loss of one encourages the enemy, and that owing to the distance a column normally proceeds from its base it is generally quite impossible to replace any casualties amongst British Officers.

British Officers should ride their ponies on suitable occasions on the march.

Admitting that officers may prefer to march with their men and also that a mounted officer offers a more easy target, it is also important to remember that an officer's most strenuous work often begins on arrival in camp.

Rifles.

All rifles will be kept loaded on the march (one round in chamber and safety catch fixed) from the time the column leaves its base. The men should learn to move on all occasions with loaded rifles.

(5) *Section Arrangements.*

Every section in the column will be proved daily prior to the hour of march.

As, on the march, it is essential that every section be prepared to detail flankers if required, every section will be numbered and told off as follows :—

Nos.	1 and 2	Right flankers	(1st Relief)
„	3 and 4	Left	„ (1st Relief)
„	5 and 6	Right	„ (2nd Relief)
„	7 and 8	Left	„ (2nd Relief).

Nos. 1 and 3 of each section together with the section commander must be in possession of whistles.

It has been found that Section "Naukari" is most suitable for columns.

(6) *Use of Fire by Advanced Point and Advanced Point Flankers.*

If it is known that the country is hostile and that opposition is possible, the Advance Point and its flankers should on occasion be permitted to fire into all danger spots and patches of jungle through which penetration by our men is impossible. This fire should be carefully controlled and only a few rounds are necessary for the purpose. By using this method the enemy's opportunities of ambushing a column are lessened, and he is discouraged. On the other hand, the pace of our column is unchecked, and casualties from enemy sniping are diminished. No tribesman will voluntarily risk the prospect of being killed by an enemy, he cannot see, without being able to fire first.

This method of dealing with an unseen enemy is not a normal procedure should it be the wish of the Column Commander to get to grips with his enemy; but it may be used if it is desired to maintain unchecked or to increase the pace of the column in order to enable it to reach camp before dark, or when the column is in difficulties or when for any reason it is impossible to put out flankers. Fire of this nature has been used with conspicuous success in the Chin Hills and the Naga Hills and the columns who used it completed the operations with comparatively few casualties.

(7) *Method of Flank Protection.*

Generally it is possible by actual practice to make the men conversant with the system of flankers prior to the column's arrival in hostile territory. Advantage should be taken of all opportunities of doing so.

No column, called on to operate in the usual thickly wooded terrain should neglect the precaution of detailing and placing out flankers when the column is *en route*. From the enemy's view point a long straggling column of troops and animals marching along a twisting mountain track and unable to see into the dense undergrowth is the ideal opportunity for employing their favourite tactics of ambushing and sniping. By so doing they can inflict heavy loss with comparatively little danger to themselves, and can delay and disorganize the column. To put out flankers is the only possible way of obviating risks of disaster. Generally, unless sustained or serious opposition is

anticipated, the leading section of the column which furnishes the advanced point will provide "right flankers" and "left flankers", and these should normally prove sufficient for the purpose.

In the event of the column encountering heavy sniping fire it may be necessary for *every section* to send out flankers to each flank.

It will be realized that no flankers additional to those actually required should be sent out. The placing of too many flankers has the disadvantages of unduly fatiguing the men and of retarding the progress of the column.

Flankers must be instructed to keep in touch with the flankers of the section in front of them and with each other. The right and left flankers of the Advanced Party must on no account lose touch with the Advanced Point or allow themselves to advance too far ahead of it or find themselves too far in rear of it. They must be constantly on the alert. They will rush across all exposed places such as narrow necks, cols, open glades in the jungle, etc. All small knolls and hills commanding the track on which the column is proceeding should be encircled. The men soon realize what the most likely haunts of snipers are. Most snipers select ground which commands a bend in the road or ground commanding the summit of a steep incline. Their own line of retreat (regarding which they are extremely sensitive) is generally secured by a steep descent which they quickly traverse as soon as they have delivered their fire. Flankers should give a loud shout and promptly make a determined dash for the sniper immediately they see the smoke of his gun. The Chins have admitted on many occasions that this interference by our flankers invariably spoiled their opportunities of inflicting casualties.

On thickly wooded mountain sides and in dense jungle the flankers quickly tire and they should be relieved as often as circumstances will allow. Half-an-hour may on occasion be a sufficient period of duty. Flankers can move but slowly at any time. When the column is temporarily halted the flankers turn outwards, *fix bayonets*, and act as sentries. On resuming the march flankers immediately unfix bayonets.

At a halt *all the men who have been numbered off as flankers* must do this even if the column when *en route* is depending for its protection on Advanced and Rear Guard flankers only.

In open country it is necessary for flankers to double out to their positions immediately the column halts. It is essential that they

move to their positions with all their senses alert and in instant readiness to use their rifles should the situation so demand. Flankers will be trained to carry their rifles as though tracking big game. The muzzle should point to the ground at an angle of 45° and should be inclined to the left. The butt should be inside of and parallel to the right forearm. This mode of carrying his rifle will enable the flanker to shoot instantaneously at any fleeting target that offers itself.

In close country flankers in a line must keep in sight of the column or of other flankers nearer the column. In this description of country the column must ensure that it does not get ahead of its leading flankers *who should be slightly in advance of the point of the Advance Guard*. Should the country be very close and covered with thick undergrowth it may be necessary to throw out a second or even a third line of flankers for a long column in order to prevent ambushes.

In the thick jungle normally encountered it is not practical to move out flankers while the column is on the move. Therefore a halt is necessary whilst the flankers are proceeding to their positions.

Should one of a pair of flankers be engaged in some such duty as cutting a path his companion must keep him covered during the time.

(8) *Bayonets.*

In dense jungle it may not be possible for flankers to move with bayonets fixed. It is important, however, that men be trained to move wherever possible with bayonets fixed. Bayonets should normally be fixed when flankers are traversing scrub jungle, tall grass, etc., and on all occasions in which this procedure would appear possible and advisable.

The rear point and flankers should never fire unless they have a definite target or are being heavily sniped. Fire from the rear engenders uncertainty throughout the column, disorganizes the transport and may cause casualties to our own column if it is proceeding along a winding track. It may, however, be necessary for this portion of the column to open fire in the case of an evacuation of enemy, village or camp.

(9) *Obstacles.*

Whilst the column is on the march it will probably be discovered that trees have been felled so as to block the road, or the road has been damaged or blocked by huge boulders. Obstacles of the nature of *panjies*, stockades, and stone shoots may also be employed by the

enemy. In encountering any obstacle, the vicinity should first be well reconnoitred in case an enemy attack is projected whilst the column is closed up and delayed by the obstacle.

This reconnaissance is the duty of the Advance Guard and they, assisted by the pioneers, will also endeavour to remove the obstacle if possible or whilst the Advance Guard is undertaking the protection of the Main Body, parties of the Main Body will clear the road, or will cut a path through the jungle so as to be able to march past the obstacle if it proves too difficult to remove *in toto*.

(10) *Action in case of Enemy Attack.*

If firing takes place when the column is *en route*, it may be due simply to snipers or it may be the prelude to an organized attack.

In the case of snipers, it is the duty of the flankers and the Advanced Party to deal with them, or in special cases, it may be necessary to detach a Section from the Main Body, for the purpose. But in any case it must be borne in mind that it is one of the primary objects of the enemy to impede the progress of the column and from the point of view of the column as little delay as is possible should be incurred.

In the case of an enemy attack the Column Commander will deal with it according to the varied circumstances. A Column Commander must remember that disciplined troops with modern rifles are able to deal with a much larger number of undisciplined and badly armed savages, however brave the latter may be individually; and that any hesitancy or premature resort to the defensive is promptly noted by the enemy whose moral is very susceptible to encouragement.

It is necessary for all men in the column to know what their role is at the time of being attacked so that no confusion occurs.

The Column Commander will not disperse his men more than is unavoidable and will keep his reserve in hand until the last possible moment and will use it to the best advantage when such action is necessary.

In the case of minor attack the Advance Guard Commander may be able to deal with it without delaying the Main Body to any great extent.

In case of a strong enemy attack the baggage mules must either be parked in a suitable position (or in the case of coolies, collected

together) or may be ordered to follow the Main Body after the supporting and Reserve Sections according to circumstances. The chief point is that the Officer-in-Charge of Baggage must be aware of what is happening, and must have definite orders as to his action.

After the enemy has been repulsed it is not, as a rule, wise to allow the troops to continue the pursuit for any distance. To do so is to disperse the column so as to be unable to deal effectively with any enemy action from another direction and might lead to grave disaster. It also, at best, delays the column.

Should the enemy be encountered in such numbers as to render it impossible to make a further advance during that day, the Officer-in-Charge of Baggage will be ordered to select a suitable defensive position as a camp, and this being accomplished, the column will retire to the site slowly and without confusion, or it may be more advisable to secure a suitable site near the scene of action and the baggage will advance to it.

PART V.

Protection When At Rest.

(1) *Preparation of Camp.*—Selection of site.

On the arrival of a column at the place at which it is intended to halt for the night, or for a longer period, it is necessary to select the most suitable site for a camp. *The first essential is that the camp be easily adaptable for purposes of defence.*

In the country normally traversed by our columns the existence of continuous thick jungle renders it a difficult matter to discover a site sufficiently clear and open for a camp, and having a perimeter which can easily be defended. It is undesirable to select a camp site which does not allow of a good line of fire and which is surrounded by impenetrable jungle at a short distance from the perimeter.

If there is a Civil Officer accompanying the column he usually desires to camp in or near a village as this facilitates his receiving information, and from the military point of view a village has on many occasions provided the most suitable site for a camp. Usually the jungle around it has been cleared to a considerable distance, and water is readily available. Also the site of the village was probably originally selected by the tribesmen with a view to its being easily adaptable for defence. It is important that camps be as small and compact as possible, so as to simplify the problem of defence.

On the Advance Guard reaching the place selected the Commander will be responsible for the defence of the column until the defence is taken over by the Column Commander.

Prompt search should be made in the immediate vicinity of the camp and any enemy encountered driven away. Picquets will be posted as required on the most commanding points. These will return to camp only when ordered by the Column Commander. The Rear Guard will also post picquets until the camp is prepared and the Column Commander orders their withdrawal.

If it is intended to camp in a village looting will not be allowed. Any supplies required will be arranged for by the Column Commander in consultation with the Civil Officer (if one be present). Precautions against fire are essential in a village.

If the site selected is in the jungle, then after due precautions against surprise have been taken, half of the strength of the men available will be detailed to clear the ground with kukris, Kachin dahs and any other effective weapons. The remainder of the men will remain under arms and will later relieve the working party. Whilst at work the men of the working party will either sling or ground their arms. All followers available will assist in cutting the jungle.

In clearing a camp site it is often found advantageous to leave intact a thin belt of jungle around the camp. This acts as a screen from the view and fire of the enemy. The ground beyond the belt of jungle should be cleared as much as possible. Trees should be felled so that their branches fall outwards and thus form a rough *abbattis*. Until the camp site is ready to receive personnel and animals all mule transport will be parked and all coolies collected in a suitable place.

(2) *Picquets.*

If time does not permit of the construction of a defensive perimeter it will be necessary to post picquets around the camp at night but a definite area for defence must be allotted to platoons.

Picquets must be self-contained and must be as small as is compatible with the object for which they are employed.

Men detailed for picquet duty must exercise every precaution in moving to their positions. They should provide themselves with cover either by digging or by building immediately they arrive in their positions.

Men proceeding on picquet duty have generally to undertake the ascent from valleys to picquet heights (usually after a tiring march).

They thus arrive in a state of perspiration and this is a constant cause of severe chill. It is therefore essential that men on night picket should take warm coats or blankets with them if those circumstances apply.

Pickets should be instructed that in the event of any hostile attack they must hold on to their position at all costs. They should also understand that any firing at night on their part is to be strongly deprecated unless they are compelled to do so in repelling an attack in force.

Sufficient stores, ammunition, food and water, etc., must accompany the picket.

The positions of the pickets should be selected by the Column Commander.

(3) *Enemy Tactics.*

During operations against these tribesmen it has been found that they habitually endeavour to creep unobserved into our camps at night with a view to stealing whatever is available; they are also partial to heavy sniping. If these practices occur the great deterrent is to allow parties of our men to lie out at night to deal with the enemy. The Chin especially is very sensitive as regards his line of retreat and any harassing of our camps is effectively dealt with by counter-harassing by means of ambushes.

Dawn is the enemy's chosen time for stalking our sentries and for attacking or pouring volleys into our camps. The enemy knows that at this time he is more likely to find the camp less effectively guarded, as some of the men may still be asleep, some will be engaged in cooking, some will be scattered about the camp for various reasons, and the sentries feeling the presence of friends around them will possibly be less alert than in the hours of darkness. It is therefore necessary that the camp be fully aroused at a very early hour. Camps will invariably "Stand to" at one hour before dawn.

It is usual to excuse from this duty one man per section in order to allow him to prepare tea for his section before the daily march begins.

PART VI.

Operations. Permanent Outposts.

(1) Unless the enemy is allowed to choose his place and time it is, as a rule, impossible to persuade him to stand his ground and fight, if he is able by any means to withdraw. In order therefore to allow of the enemy being pinned down until all preparations have been

completed, it is of primary importance that he receives no useful information of projected movements, otherwise, unless he is in an extremely strong position, with overwhelming superiority as regards numbers, and with his line of retreat intact, it will be discovered that it is impossible to arrive within assaulting distance of him and thus bring about a decision. If the enemy is able to withdraw it is generally found that effective pursuit is impossible owing to his extreme mobility and his intimate knowledge of the country.

(2) *Secrecy is therefore of primary importance.*—Any information which is allowed to reach the enemy should be of an utterly misleading character. It is therefore essential that any projected attack be kept within the knowledge of few people, other than the Column Commander, until the latest moment.

(3) *Reconnaissance must be thorough and systematic* before final plans are made and an attack undertaken (more especially if the attack is on a flank or in rear). Once a flank attack has been launched, touch between those undertaking the flank attack, and those responsible for the feint attack, is difficult to maintain.

(4) *Attacks on a Village or Stockades.*

The primary duty of a Column Commander in the case of a projected attack on a village or stockade is careful reconnaissance. By means of this it will generally be ascertained that it is possible to take the position in flank or rear. Tribesmen are inordinately sensitive as regards their line of retreat, and generally it may be assumed that the most effective way of dealing with the enemy position is by means of a feint attack from the front with the main attack from one or both flanks, or if possible, from the rear of the enemy's position.

The front of a stockade or village is almost invariably thickly planted with obstacles such as *panjies* (sharp pointed bamboos) and deep concealed pits having sharp stakes pointing upwards from the bottom skilfully, covered over with dead leaves, etc. In the case of a strong frontal attack those obstacles would almost certainly cause loss of life; whereas if the attack were made from a flank or from the rear the enemy's fear as to his line of retreat would speedily compel him to relinquish the fight.

Lewis Gun fire has a very appreciable moral effect on savage tribes and is also very successful in keeping down the enemy's fire if concentrated on the embrasures, etc.

If opportunity offers, men may be told off to creep near the village with lighted torches. These they will throw on to the nearest roofs or any inflammable material.

In attacks on stockades, etc., sited on a height, one of the enemy's methods of repelling attacks is to roll or throw down huge boulders on to the attacking force.

After the capture of a village the men should not be allowed to wander about shooting pigs and confiscating fowls, etc. Under the orders of the Column Commander all property should be collected immediately.

As the column leaves the captured village it is possible that the enemy, unless extremely demoralized, will make an attack or in any case will commence vigorous sniping.

(5) Return from Attack.

If the column has marched from a standing camp to attack a village, and is returning after successfully accomplishing this to its camp, it is advisable, if this course is at all possible, to return by another route. If there is but one route available, men should be dispatched from the camp to meet the returning column and to deal with serious sniping. It may be possible for the column to drop parties of men whilst *en route* to the attack. These men should be given orders to conceal themselves and deal with snipers. This procedure should ensure a peaceful return march to the column after completing its work.

(6) Night Operations.

In view of the extreme difficulty of controlling men in the jungle at night, it is only on occasions that night operations will be considered advisable. In a case where it is possible for a party to find its way by night to the vicinity of its objective (as where a party leaves a camp at night in order to surprise a village at dawn) the results are often worth the labours involved. It is usual to detail a small party for the work and it proceeds with due precaution, followed by the remainder of the column, at a distance, in order to support the attacking party. Absolute silence during the march, no smoking, no lights of any kind are essential conditions, and failure to observe any of these may not only render success unlikely, but may, on the other hand, gravely endanger the safety of the column. No firing should be permitted during the march, and if picquets of the enemy are encountered the bayonet

only will be used. On arrival at the village the force should be concealed all round. At dawn the attack is made, the village destroyed, etc., and when operations are completed the force returns to its camp.

(7) Operations by Mobile Parties.

In cases where the main forces of the enemy have been dispersed and the pacification of a district is in progress, and conceivably in other circumstances, it has been found an effective plan to dispatch small mobile parties from a standing camp to operate away from the ordinary tracks, in search of small parties of the enemy who are conducting guerilla warfare in the woods and to destroy them and their villages. In these cases it is impossible for mule transport to accompany the forces and the danger, if coolies were used, of their wittingly or unwittingly causing the lurking enemy to become aware of the presence of the pursuing party, renders it necessary for the officers and men to carry their own supplies for the period during which the party will be away from camp. The usual procedure is for the men to carry 3 or 4 days' rations rolled up in a blanket which they carry with ease on their backs. If a body of the enemy is suddenly encountered, the bundles are dropped in a convenient place and retrieved at the conclusion of the fight. By this method of procedure, it is possible to pursue the remnants of the enemy into the furthest recesses of the hills and eventually to compel them to capitulate. It has been found that 3 or 4 of these columns radiating from a standing camp can, if wisely handled, affect the pacification of a district in a short time.

(8) The Defence of a Permanent Outpost.

Scattered along the Burmese frontier are many outposts manned by the Burma Military Police. The strengths of these posts vary from 250 men to 30 men according to their strategic position and importance and the distance from Battalion Headquarters. Each frontier battalion has several outposts under its jurisdiction. The more important outposts are commanded by a British Officer; in other cases an Indian Officer is in command. The Officer Commanding is responsible for maintaining his outpost in a state of defence at all times and for offensive action as circumstances demand.

The strength of an outpost is fixed with a view to the protection of the munitions, stores, and families of the men (pending their evacuation, if possible) and with a sufficient margin to allow of a *Mobile Column* being detailed and trained to undertake offensive action outside the area of the outpost position, or as a reserve for active defence.

It is essential that a thorough reconnaissance be made of the neighbourhood and of all passes, etc., leading from what might on occasion be hostile territory. The British Officer will be responsible for acquiring a thorough knowledge of the neighbourhood. Reports of all reconnaissances will be preserved in a Route book kept in charge of the British Officer or Post Commander.

Men should be encouraged to learn the local dialects and every man should have an intimate knowledge of the country within 5 miles of his post. Often this knowledge can only be attained by systematic patrolling.

During patrolling exercises, good fire positions should be selected, also places for ambushes, along lines of possible enemy advance.

It is essential that a *Range Card for Defence* be prepared and that all the distances to the most prominent objects in the vicinity be known by all ranks.

Alarm Orders will be prepared in all cases and the following headings should be considered :—

- (a) Action to be taken by all ranks, families, Medical Staff, followers, coolies, personnel in charge of mules, upon the alarm sounding.
- (b) Defensive dispositions (1) By day, (2) By night, (3) Details of Reserve and action to be taken.
- (c) Ammunition arrangements.
- (d) Medical arrangements.
- (e) Administrative arrangements regarding families, refugees and their accommodation and sanitary arrangements, accommodation for animals, their feeding, watering, etc.
- (f) Arrangements for collecting information.
- (g) Signalling arrangements.
- (h) Arrangements regarding water.
- (i) Reports.

Alarm orders will be preserved in a special file after they have received the approval of the Battalion Commandant.

(9) *Advancing by Water.*

It may on occasion be necessary to advance towards the source of a river. In this event the principle is to advance by bounds.

First, the advanced base must be established and consolidated. This is followed by an advance by road to the place at which it is

next considered necessary to halt. Picquets will make good the next line.

In the case of a broad river it is preferable to move on one bank only.

Normally the noise of a fast flowing stream is so tremendous that signal by whistle is impossible. It is therefore necessary to arrange for signals by bugle.

PART VII.

Training.

(1) *Training of Junior Leaders.*—In every way the work of a column is facilitated if the non-commissioned officers are well trained. In jungle warfare control is much more difficult of attainment than in normal warfare and a high standard of efficiency and of self-confidence is necessary. This can only be cultivated by constant and systematic training.

(2) *Panjies.*—Before a column marches into hostile territory every man should be taught to make panjies (sharpened bamboos) and a large number should be taken with the column. They are used for placing around a camp if there is danger of an attack and also for blocking paths in a very effective way. The men quickly become efficient in the making of panjies if shown a sample.

(3) *Training in Field Works.*—It is generally possible to include a certain amount of training in the making of entrenchments, the construction of chuppers, road and bridge-making. The more training the men can be given in works of this description the more the progress of the column will be facilitated when actually in hostile country.

THE SOURCE OF DISCIPLINARY AUTHORITY.

By

CAPTAIN H. BULLOCK, F. R. HIST. S. ; INDIAN ARMY.

In the control of military discipline, as in all other matters of State, the Fountain of Authority was the Sovereign, whose word was law. Unable personally to cope with executive detail, the Sovereign had to entrust control to the Constable, his Chief Staff Officer. The latter in his turn handed over much of the detail to the Marshal, the Quartermaster-General of those days.

In the course of time, as will be shewn, the Constable took unto himself an authority so great that it rivalled that of his Sovereign ; so his head was cut off and his office abolished.

Then followed a period of flux. Many other factors combined to dictate a change. Various expedients were tested, and finally the system by which the military offender was tried by a tribunal composed of his own officers was introduced. But the control of the nation itself was changing. Extraneous and more important influences were brought to bear on the source of disciplinary authority ; and Parliament, at first content with a mere inspection of the Sovereign's acts, finally acquired complete constitutional control.

To proceed to an examination of this development in more detail.

The Sovereign.

At the head of the Army, as of the State, was formerly the Sovereign, who (when the occasion demanded it) led in person his armies in the field, that familiar act which we have seen depicted in Shakespeare's *Henry V*, and which was carried into practice for the last time when George II commanded the infantry at Dettingen—not, as is often stated, the whole army.

Much of his administrative authority was delegated by the King to the High Constable, whose duties thus came to include the supervision of disciplinary matters and the conduct of the military and chivalric tribunal usually known as the Court of the Constable and Marshal ; or alternatively as the Court of Chivalry, or Court of Arms.

The Constable.

The Constable's military duties approximated to those of a present day Adjutant-General, whilst the Quartermaster-General

of to-day found a counterpart in the Earl Marshal, who is more often referred to simply as the Marshal. Both he and the Constable had other non-military duties in respect of the royal court ; such as the ordering of the sovereign's camp and the supervision of the royal servants.

For many years the office was hereditary in the family of the Earls of Hereford and Essex, but finally it was found that the Constable had acquired so much authority that it clashed on occasion with that of the King himself. He was considered too powerful for a subject ; and on the attainder and execution of Edward Duke of Buckingham, the then holder, the office was allowed to lapse. For special occasions of state, such as coronations and the trial of high misdemeanours, it has sometimes been revived for limited periods ; but from the early sixteenth century no notice need be given to the Constable in connexion with military discipline.

The Marshal.

On the abolition of the office of the Constable, the Marshal continued to exercise the disciplinary functions of his former superior, and the military tribunal therefore bore the title of the Court of the Marshal or Marshal's Court, a name which is preserved—in a slightly changed but identifiable form—by the present day Court-Martial.

The office of Marshal was formerly held by individual grant from the King, but has from the time of Henry VIII to the present been held hereditarily by the Dukes of Norfolk, though there have been breaks in the continuity of their tenure from such causes as attainders and during the period of the Commonwealth. Never formally abolished, a Marshal's Court sat for the last time in the reign of Queen Anne, though on that occasion it was not for the trial of a military offence—it had lost cognisance of these long before. The Earl Marshal is now deprived of all military responsibility, and is known to the public chiefly by his appearance at such State ceremonials as coronations.

A detailed account of some of the duties of an early Marshal of England may be seen in Grose's *Military Antiquities*, (1786-8), i, 225, from which it will be appreciated that both dignitaries had valuable perquisites. The Constable had first choice of the spoils of battle, whilst the Marshal had but the reversion of what was left. Valuable information is also to be gleaned from Francis Markham's *Five*

Decades of Epistles of Warre, which describes the Marshal's duties at a later date, when he was no longer subordinate to a Constable.

The Decline of Chivalry as a Factor in Discipline.

Step by slow step across the Flander's marshes, spurred by that song which was the very antithesis of such political sentiments as he possessed, the English private of foot advanced all unknowingly along the path which was ultimately to lead to the establishment of the British Commonwealth, murmuring the strains of *Lilliburlero*. From end to end of the Low Countries and back again, and yet again to the Danube, there marched and fought and died the pressed men. Crimped for service at the outset, cramped by their four-inch stocks, burdened by their eighty-pound knapsacks, and endlessly nodding under their tall grenadier caps, yet by their incessant subjection to a savage discipline they achieved Minden and Dettingen. It was indeed in the hearts of these men that the British Empire first became pregnant.

When did chivalry decline, to be replaced by this iron discipline ?

By the chivalric control of discipline was understood that attainment and maintenance of a standard of honour which alone should direct the personal conduct of every soldier in the field ; a code which, deriving its inspiration from the King as the fountain of authority, was reduced to writing at his direction by the Constable of England. The code was detailed and explicit, and was administered by the Court of Chivalry. It was directed rather against possible misbehaviour by the rank and file men-at-arms, archers, pages and sutlers—than against any possible delinquents amongst the officers—nobles, knights and esquires. For it was considered that, owing to their birth, these latter classes possessed an inherent sense of chivalry, and that their peremptory subjection to discipline was unnecessary by reason of their inborn characteristics.

The period of transition, from the original method of maintaining discipline by agreed observance of the chivalric standards to the later procedure of enforcing discipline by a rigid code of laws, is undoubtedly the period which commenced with the Civil War and culminated in the establishment of our standing army.

That chivalry was a vital force in the English Army till then may be seen from the record of the English volunteers in the Low Countries during the reign of Queen Elizabeth ; that reign which was

for chivalry, as for literature, a Golden Age. The chivalric spirit was never more truly exemplified than in the persons of the fighting Veres and Philip Sidney. Sidney indeed adorned both fields—Chivalry and Letters; as Marlowe and even Shakespeare himself may have done. The knightly spirit made as glowing a spectacle at the siege of Breda as on the Field of the Cloth of Gold long before.

By the end of the Commonwealth the position was entirely changed; the Articles of War were directed against officers as well as soldiers; the punishments laid down were stringent to the point of barbarity, according to present-day standards. So soon as the morrow of the Revolution, Parliament for the first time displayed a direct interest in the punishment of purely military offences by passing the first Mutiny Acts, though it is true that 250 years before a statute (only temporarily enforced) had provided for the punishment of desertion by civil tribunals. These Acts, remaining in force for periods which later approximated to one year, gradually encroached on the Royal Articles of War, and postulated not only standard minima of punishments for specified offences, but also regulated the composition of courts-martial, forms of oath, and the like.

Limited Parliamentary Control.

In 1748 the Commons demanded with success that copies of all Articles of War made since the Commonwealth should be laid before the House, thereby appearing to cast doubt on the validity of their issue under the sole authority of the Royal Prerogative. It was not till 1803, however, that Parliament established its right to inspect and approve each successive military code as soon as it was formulated, thus initiating full constitutional control.

Full Constitutional Control.

So in that year came the death-blow of the prerogative; but Chivalry as the Master of Discipline had passed away a century and a half before, wounded by the influence of internecine strife on the national standards of honour and trust, and killed by the inadaptability of a code based on purely moral considerations to the material problems of discipline existing in a standard army.

Chivalry's glorious day was over. It was superseded by the Sovereign's explicit commands, expressed and executed with savage severity. Early in the nineteenth century, as has been seen, these gave way in their turn to a deliberate constitutional procedure, carried

out by and with the consent of the people, who finally achieved complete control on the amalgamation of the Articles of War and the Mutiny Act in one comprehensive statute. Our present Army Act represents that statute to-day.

Vestiges of the Royal Authority.

In various directions there still survives the direct disciplinary authority of His Majesty. For example, the right of every officer of the Army to address his Sovereign on any matter in which he conceives himself aggrieved has been preserved, and is now safeguarded by explicit legislation. Again, the whole structure of the present court-martial system rests on Warrants under the Sign-Manual, issued to the several officers in chief command of His Majesty's Forces ; and the Sovereign yet retains, and in some cases exercises, the right of confirming the proceedings of a general court-martial.

These examples of the existence of a living exercise of authority by the Crown can be multiplied ; but those given should suffice for the reader to assess the place in our constitutional structure of the Fountain of Authority, as far as military discipline is concerned.

WITH THE XIII DIVISION SIGNAL COMPANY IN GALLIPOLI.

By

BREVET LIEUT.-COLONEL H. E. CROCKER, C.M.G., D.S.O.,
THE ESSEX REGIMENT.

After six months' strenuous training, we entrained on the night of the 13-14th June, 1915, and embarked at Avonmouth, for Mudros. Our horses and vehicles were left behind at Alexandria, and the remainder of the company disembarked at Mudros on the 5th July. We had our complete outfit with us, except the horses and vehicles, and how we were going to man-handle the heavy D5 cable up and down the hills and valleys of the Peninsular remained to be seen. The drums of cable weighed a hundredweight, and could be carried by two men on a special kind of stretcher.

After a few days, our division was sent up to Helles to relieve the XXIX Division, which came to Mudros for a rest.

We remained a few weeks at Helles, during which time we underwent our baptism of fire, and had a useful experience in the way of keeping communication open in spite of heavy shelling and rifle fire. The cables were cut several times a day, but thanks to an elaborate system of "laddering," we could always get through by some route or another. Our headquarters were in the Gully Ravine, a deep narrow ravine running northwards towards Krithia from the toe of the Peninsular. It also served as the principal line of communication to the front. The heat under the July sun was most trying, and the combined smells were overpowering. Flies awoke in myriads, and swarmed over everything. The heat, combined with hard living and bad water, soon told on the fresh troops, and sickness became rife. We only stayed there for about three weeks, and then returned to Mudros.

About this time preparations were in progress for a big push on the Sari Bahr position, possession of which would permit of observation to the Narrows. The 29th Division were to return to Helles while the 13th Division were destined as reinforcements to the Australian and New Zealand forces at Anzac.

Our Division soon had orders to move to Anzac, and brigades were sent up separately. The Signal Company was the last to go, and we had orders to take only such gear as we could carry by hand, an order which, if carried out, would have abandoned all our cable. We disobeyed orders sufficiently far as to take a certain amount, but

were unable to land even that small amount, as the Master of our ship felt nervous as dawn approached, and cleared off, carrying several miles of our precious cable with him. It took a long time before we could get it sent up again, and meanwhile we had to borrow what cable we could from the Anzac Signallers. On arrival, we found that instant cable communication was required to each of our three Infantry Brigades, and, in addition, to several detached forces, composed of mixed units. The only means we had of carrying the heavy cable was by man-handling it on the stretchers, and this, we found at once, was a practicable impossibility over that country. Luckily we were able to borrow several hand drums from the Anzac Signal Company. I never could understand why we were the last to arrive. Communication is always required at once, and the Signal unit, or at least the headquarters and essential details, should have been among the first to arrive. We soon found out where the brigades were situated, and communication was quickly established.

Divisional Headquarters were installed in a little re-entrant in the cliffs overlooking the sea about one and a half miles north of Anzac Cove, close to what was known as "Old No. 3 Post." This was a post which had been made by the Australians, as marking their left flank. From it we could obtain a magnificent view over the Suvla Bay country and the Salt Lake to the north. We were close to the edge of the sea. Our troops were at that time holding a scattered line about half a mile or so inland, holding on to the crest of the ridges by their eyelids, so to speak. We were, literally, between the devil and the deep sea. Communication to the front lines was carried out along the three valleys which ran up from the sea shore to the hills above. There was one just south of us, while the Chailak Dere and the Arghil Dere were to the north. All three were under observation by the Turkish snipers, and as we went along, we had to run the gauntlet. Sentries were posted at well-known danger spots to warn the unwary passer-by, and the warning—"Run like hell, Sir, there's a sniper up in that hill," made us sprint round the corner at best speed. These "Deres," or valleys, offered admirable lines of communication, along which we placed our cables, hitching them up to trees where safe from bullets. Our headquarters, by the way, were under incessant rifle and machine gun fire, and every evening, bullets used to come down in swarms. Several men were hit just outside the signal tent.

The big push was to take place on the 7th August, and our division was to assault the left of the line, against the Turks' right, while the Anzac troops were to make a direct drive on to Sari Bahr, and the hill system to the south of it.

The columns formed up and started under cover of darkness, so as to arrive at their appointed places, whence they would make the final assault by day-break. Our 39th Brigade was already in position on our right, where they were in touch with the left of the Anzac troops. The 38th Brigade, already in the Arghil Dere, the more northerly of the valleys, had to advance by night until they struck a narrow track on their right leading over the divide down into the Chailak Dere. They were then to cross the Chailak Dere, and find their way up the hills to a point that would bring them on the left of the 39th Brigade. The night was pitch dark, but they had guides. The 40th Brigade acting as left flank guard to the whole force, was to march along the sea shore until clear of the hills, and then to take up a position on the Damajelik Bair.

Each brigade had its Signal Section, the cables to the 38th and 40th Brigades being carried by hand. Each Signal Section had a Subaltern Officer in command of it.

Communication to the 39th Brigade was already established, and needs no comment.

The other two brigades started off, and from time to time we heard that all was well. Then nothing came through for some time, and we had no idea of what was happening. In the pitch dark, it would be no easy job to find the way, and the G. O. C. was becoming nervous. At length we had news of the 40th Brigade. The Signal Section had fallen behind owing to the difficulty of man-handling the heavy cable in the dark, but all was well. In due course we heard that the brigade had reached its destination without further adventure.

With regard to the 38th Brigade, things were not so well. They advanced up the Arghil Dere without much difficulty, and duly found the path over the divide, and descended into the Chailak Dere. Here their real troubles began. The path was rough and narrow, and the men, partially trained, and weighted down with their equipment, soon became exhausted, and straggled. Officers were themselves out trying to close up the long files of men, which, in spite of frequent halts, could hardly be urged on through the night. At length the Chailak Dere was reached, and the guide essayed the almost impos-

sible task of finding the track which led to the position of assembly for the brigade. They had by now arrived in a small circular opening in the Dere, from which the track debouched. He went round this opening four or five times before he found it, as was evident from the number of circuits of cable laid by the cable party. The whole place was wrapped in cable.

This check gave an opportunity to the men to close up, and the brigade resumed its scramble up the path to the spur on the left of the 39th Brigade. At length the guide assured the Brigade Commander that he had reached his destination, and the fact was duly reported to Divisional Headquarters. What happened after that is uncertain. We heard from the survivors of the Signal Section that every soul lay down where he was and slept, trusting to the assurances of the guide. They had a rude awakening. As the day broke, they found themselves close to the "Farm," in a hollow in the hills well in front of our lines, and almost surrounded by the Turks. Immediately a heavy fire was poured into them at close range, and then the Turks charged. The brigade, exhausted and half awake, was in no condition to make a successful resistance. They fought it out where they stood, each man fighting for his life, and the Turks paid dearly for their success. Officers and men fought side by side with revolver, clubbed rifle and fists. The Brigade Commander and the Signal Officer were killed in the front line, fighting to the last. The survivors made their way down the Chailak Dere, where they were reformed by the Staff Captain, and took up a position to stem any pursuit, but the Turks did not follow them up. It would have been suicide for them to have crossed those ridges exposed as they would have been to the fire from our ships' guns.

I have no desire to enter into a long account of these operations, how nearly we achieved our object, and how we advanced our line some considerable distance.

In 1922 I had an opportunity of revisiting the Peninsular, and was taken round the Sari Bahr positions by a Turkish Officer who had fought against us there. His battalion had, apparently, attacked the 38th Brigade, and he described their feelings of amaze when they woke up and found the brigade out in the open beneath them.

For the remainder of August the position at Anzac was one of stalemate. If we could not move, no more could the Turks. Fresh columns were formed, and units were transferred from one command

to another almost daily. One or more companies of some battalion would be sent off to someone else's column for a few days, and then returned. It all made the task of maintaining communication rather complicated. Cables were frequently cut, and the task of repairing them, under the fire of the snipers, who kept appearing at unexpected places, was quite exciting. On several occasions, while up a tree with the cable, I heard the smack of a bullet in the trunk below. There were all kind of wild descriptions of Turkish snipers—one was supposed to be a woman, painted green. I certainly found a large hollow tree where a sniper had evidently taken up his abode, for there were several water tins, and a large pile of empty cartridge cases at the base of the tree.

At the end of August we moved to Suvla Bay and took over part of the line from the 54th Division. General Shawe had left us, and we now had General Maude as Divisional Commander.

We had all three brigades in line, the 38th on the right on Chocolate Hill, 40th in the centre, and the 39th on the left; on the right of the 29th Division. Our headquarters were established in some large dug-outs excavated in the cliff overlooking the sea, well out of rifle range from the front, which was a welcome change. By now we had all the cable we required, and at once organized a complete cable system to the front brigades, besides a good many other centres, such as a naval forward observation post, and several others.

The hill of Lala Baba was prepared as a forward battle centre, and complete cable communication was installed, duplicating the main lines which would be switched on to Lala Baba if required. As this hill was much exposed, all cables were buried at least 6 feet deep. The main cables to the front were led along either bank of the Salt Lake and were supported on fir poles, each brigade had three separate cables leading to its signal office, while a central "main artery" cable was laid through the bed of the Salt Lake, at that time quite dry. This cable was the only one that continued working during the three days of the great storm in November, which speaks well for its insulation. Corps Headquarters, on the point of the bay to the north, laid a deep sea cable of D5 wire to us through the bed of the sea, which never ceased working throughout the operations.

All cables near Divisional Headquarters were buried deep in the ground, but even then were frequently cut by shells. One day a shell

entered the signal office, just missing my head. Luckily it was only filled with sand.

We had great trouble at night from the ration convoy which used to trust to our cable poles for guidance on their way to the front. They would often tear down a few of the poles and wind the cable up round the wheels.

The great storm in November was a good test of the efficacy of the communication system, and it never completely broke down. The cable through the lake worked, but the others were all "dis" at once, owing to breaks. The linemen were out at intervals all night, and we kept them repaired as quickly as we could find the breaks. In the meantime we carried on with lamp, and the one cable, which was switched through to all brigades. All the Brigade Signal offices were flooded out, which occasioned some delay.

The storm started with heavy rain, which rapidly turned to sleet and snow. The trenches were flooded, and several men were drowned. There was nowhere to go, and no possible chance of drying clothes or preparing hot food for the moment. The Division lost heavily through cold, exposure and frost bite. The storm passed away as rapidly as it came, and we had glorious weather till the evacuation in December.

We learnt a good many lessons from this campaign, from the Signal point of view, such as—

1. Headquarters and essential details of the Signal Company must go on in advance with Divisional Headquarters.
2. In country where horses and vehicles are not possible, a lighter cable should be carried, preferably D3 and wound on a lighter drum, such as the Indian pattern.
3. Good insulation is essential. This seems obvious, and yet some of the D5 cable was so badly insulated that the line went "dis" at the first shower of rain.
4. The value of the "Main Artery System," though not then properly realized, was proved on several occasions. For instance, communication to the three brigades at Suvla depended more than once on a single central cable laid through the bed of the lake. The value of frequent laddering was amply demonstrated.

Fresh gear is devised, and new methods are constantly taken into use, but the old principle of the Signal Service stands for all time :—

"Communication, once gained, must never be lost."

MILITARY NOTES.

AFGHANISTAN.

The King's European Tour.

The King's tour commenced according to plan. His Majesty arrived with the Queen and his suite at Chaman on the Indo-Afghan frontier on 10th December, at Karachi on 11th December, and at Bombay on 13th December. The party then sailed in the P. & O. s.s. "Rajputana" on 17th December. After making a brief halt at Aden on 21st December, the King disembarked at Port Said on 26th December for a visit to Egypt. The next item on the programme is a visit to Italy which will be undertaken early in the New Year.

Aviation.

On 28th November a Russo-Afghan agreement was signed at Kabul establishing a regular joint air service between Kabul and Tashkent.

ARABIA.

South-West Arabia.

On 29th September an important raid into the Aden Protectorate was carried out by Zeidi tribesmen supported by regular troops. After penetrating as far as the neighbourhood of Turan the raiders withdrew northwards, leaving detachments within our Protectorate limits. This incursion was made in direct defiance of the warning which had previously been sent to the Imam of Sana'a. Our aircraft from Aden therefore flew over the affected areas on 4th October and dropped further warnings to the effect that bombing would be commenced on 6th October if any raiding parties still remained on our side of the border on that date. On this occasion our warnings proved to be effective. The Zeidis withdrew within the time limit imposed and, despite rumours that renewed raiding was impending, no further incidents took place during the month of October.

Nejd.

During November and December several raids were carried out by Akhwan of the Mutair tribe into Iraq and Koweit territory, which

resulted in the death of a number of Iraq nationals and considerable material loss.

Retaliatory action was carried out by the air and military forces in Iraq to restore the situation.

BELGIUM.

"Bulletin Belge des Sciences Militaires."

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October, 1927.

1. *The Problem of Security.* (Continued.) *War of 1870.*
By Major Barthélemi.

Of historical interest.

The author, discussing the question of strategical security in war, bases his arguments on an incident in the 1870 campaign, when the French Army decided to offer battle to the German Army on the Moselle. The conflicting opinions of Moltke and Prince Frederick Charles as to how the attack on the French should be undertaken forms the subject of this article.

Moltke's views as to the mission of an advanced guard, with regard to obtaining information as to the enemy and to securing manœuvring space for the main body, when in close proximity to the enemy, as illustrated by the fighting on the Moselle, are of interest.

The article ends with a discussion of the manœuvres of the French and German Armies on the Meuse. The strategical problem under discussion is whether a co-operating army of observation could insure the security of an investing army (that of Frederick Charles) against the attempts of a relieving army (that of McMahon), whilst at the same time threatening the latter's line of communication.

2. *Doctrines with regard to the Employment of Artillery.*
(Continued). By Captain Béretze-Colet.

Of interest.

The subject discussed in this article is the employment of artillery before the attack and the question of creeping and stationary barrages. The writer quotes regulations on this subject from the leading European armies—Germany, France, Belgium and our own F. S. R., Vol. II.

In conclusion the writer gives interesting examples gleaned from the experience of the above quoted countries in the Great War.

3. *The Conception of Manœuvres in Small Infantry Units.*

(Continued). By Major de Cae.

Of little interest to the British Army.

In this article the author discusses the tactical employment of infantry units within the battalion, *i.e.*, companies, platoons and groupes with a view to laying stress on the absolute necessity of combining fire with movement, as also on the co-operation of flanking units with the unit primarily concerned in carrying out the allotted task.

Instances are given from the war where the adoption of these principles, or the failure to appreciate them, led to success or failure.

Frequent references are made to the Belgian Infantry Regulations, with a view to showing that they have been drawn up in support of the principles advocated.

4. *Methods of Artillery Fire by means of Biaxial Observation.*

(Continued). From the work of Lieut.-Colonel.

5. *The 2nd Ballistical Problem from the work of V. Burzio.*

(Continued).

Two very highly technical and mathematical studies of artillery, of interest only to the scientific branches of artillery.

6. *The Offensive: Attacking the weak spot, from the work of Major Van Overstraeten. "Des principes de la Guerre à travers les ages."*

Of historical interest.

The guiding maxims of this work are that "The destruction of force is the essence of the battle" and that "the offensive is the mode of action best calculated to enforce the will to destroy the adversary's forces. The offensive alone imposes this maxim on the enemy."

The writer goes on by historical and modern references (taken from the campaigns of Napoleon Gustavus Adolphus, Moltke, Ludendorff, Joffre and others) to demonstrate that history proves that the great captains have always adopted the offensive on the battlefield. They were careful to choose the moment for the offensive, when their numerical or moral ascendancy was assured. They thus placed themselves in the ideal conditions to insure victory.

The principle of attacking the enemy's weak spot constitutes one of the most precious lessons in military history, which should be

acted up to by all commanders, from the army commander to the smallest unit commander. Historical and modern examples in war are given with regard to this maxim.

November, 1927.

1. *The Defence of the Territory.* By Lieut.-Colonel Hans. Of interest from the point of view of Belgium as a military factor.

This article propounds the doctrine that for the adequate defence of a country, the industrial and military mobilizations must synchronize, and at the same time produce the maximum output of strength. This subject is dealt with principally from the point of view of the problem confronting Belgium at the present day. The two main principles discussed by the writer are first that the military spirit in Belgium is produced alone by the military training given during the periods of military service, and secondly, that the interpretation of the word "army" is "the nation in arms," meaning the mobilization of the country as a whole.

2. *A Study of the Problem of Fire Concentration.* By Major Smedts. (To be continued). Of interest to the artillery.

A technical and statistical study regarding the employment and effect of artillery fire under varying conditions, showing the predominant effect of artillery fire in modern warfare, as compared with all other offensive armaments. An extract from French medical statistics is given, proving that in the last war casualties caused by rifles and machine guns were 23 per cent. and by shell fire and grenades 67 per cent.; the percentage of wounds caused by grenades was low, nil for the early battles of the war and nearly nil at the end of the war.

3. *Protection of an Army Corps on the March by Anti-Aircraft Artillery.* By Major Molhant. Of interest to the artillery.

Another highly technical article from the point of view of anti-aircraft artillery, in which the possibilities of anti-aircraft work by artillery during the movements of an army corps are discussed. The two chief questions dealt with are :—

- (1) Insuring adequate protection to the main body of the army corps, which entails placing the anti-aircraft artillery in the forward zone and consequently rendering it inoperative against such of the enemy's aircraft as may have traversed

its zone of action and are directing their efforts against the rear of the army corps.

- (2) Restriction of effort to defending vital points or regions which are affected by the line of march selected by the army corps.

4. *Military Re-organization in France and Length of Service.*

Of interest as a study of conscript armies.

The writer groups his subject into the following paragraphs :—

- (1) The manner in which the problem presents itself to France.
- (2) The solution of the problem.
- (3) The preliminary conditions required before coming down to 12 months' military service.

The conclusions which the writer comes to so far as France is concerned, are as follows : French military projects are based on the existence of a peace army strongly encadred and thoroughly instructed, capable of warding off by means of rapid mobilization, any sudden attack and at the same time to allow the main army and nation as a whole to develop its full strength in the time limit allotted to it.

December, 1927.

1. *Operations of the Belgian Army, 1914-1918. (Continued.)*

Day of the 25th October, 1914.

Operations between the Sea and Nieuport.

In continuation of the events recorded in the November number. One battalion from the French 42nd Division was despatched to Dixmude to reinforce Admiral Ronarch. During 25th October two French Territorial battalions from Dunkerque were placed at the disposal of General Grossetti. On the evening of 25th October the Germans attacked on a front held by two battalions of the French 84th Brigade, defending the sector in front of Nieuport. The attack was repulsed.

Operations between Nieuport and Dixmude.

The 25th October passed without any important events on the front held by the 2nd Belgian Division. On the front of the 1st Belgian Division the commander realised the urgent necessity for the relief of his exhausted troops and of his worn out artillery material.

No event of importance occurred on the front held by the French 83rd Brigade, which had been withdrawn from the French 42nd

Division, to the neighbourhood of Stuyvekenskerke, and was placed between the 1st and 4th Belgian Divisions.

The operations in front of, and to the south of Dixmude are next described on pages 495—496. The 25th October may be said to have passed off without any important incident.

The operation order for the 26th October is published on page 499.

The chapter ends with an interesting account of the arrangements made both by the Belgians and by the French for inundating their fronts, should the necessity arrive. So far as the French were concerned, the inundations were for the purpose of protecting Dunkerque. Pages 500—508.

2. *The Belgian Effort on Lake Tanganyika during the War of 1914-1918.* (Continued). By Captain Weber. Chapter IV.

Of interest. *Part I* continues the narrative of the November number with regard to the conquest of Lake Tanganyika, and begins with the description of the action of the two British gun-boats "Mimi" and "Toutou," under the command of Commander Simson, resulting in the capture of the German gun-boat "Kingani" and the destruction of the German gun-boat "Hedwig."

Part I ends with an appreciation of the operations of our flotilla under Commander Simson.

Part II deals with the arrival of the Belgian Colonel Moulaert, who took over the command of the transportation services of Lake Tanganyika, and gives his appreciation of the steps which were still required to gain the mastery of the lake transportation.

Part III reviews the Belgian dispositions and the situation generally at the moment when Colonel Moulaert took over command.

Part IV describes the organization of the naval base at Albertville and ends with an account of the construction of new lake gun-boats and material.

3. *The Motorization of Artillery.* By Major-General Pierret.

Of interest. The writer enters into a lengthy discussion of the arguments applicable to all modern armies, regarding the value of the mechanization of artillery of all descriptions as opposed to horse drawn artillery. He sets forth the advantages and disadvantages of both descriptions of transport in an instructive manner.

On page 537, he discusses the three descriptions of mechanized artillery, i.e., "Artillerie portée" (guns and limbers carried on lorries) "Artillerie Tractée" (tractor drawn guns and limbers) and "Artillerie sur affut automoteur" (artillery on mountings fixed to a motor vehicle for anti-aircraft work).

• On page 539 the writer discusses motor drawn artillery in connection with every description of artillery used in the field.

On page 546 the resources in material, personnel and accessories such as petrol and oil are considered. The writer ends his chapter by reviewing what has been done in the various European and American armies in the way of mechanization of artillery.

4. *Tanks.* By Major Lievin.

Of interest. Certain technical considerations regarding tanks. The author divides his work into two parts:—

A.—Tanks of accompaniment.

B.—Heavy tanks to break through the enemy's position.

The chapter is illustrated with pictures of various types of tanks, chiefly French, and the heavy British Mark VIII tank (a model built for the 1919 offensive). Also the Italian 40-ton Fiat tank.

This work on tanks is the first which has appeared in the "Bulletin Belge" and will be continued.

5. *Study of the Problem of Fire Concentration.* By Major Smedt.

Of interest only to the artillery.

A highly technical and mathematical treatise on artillery fire.

CHINA.

THE SITUATION.

1. *Civil War.*

The month of September as particularly quiet as regards fighting in China. This may be explained largely by the fact that harvesting was in progress over a large part of the country.

The month of October has seen a renewal of hostilities, the most important of which has been the campaign between Yen Hsi-Shan, the Governor of the province of Shansi, and Chang Tso-Lin, the Generalissimo of the Northern allies.

For some years Yen had maintained an attitude of neutrality towards the Chinese civil wars. Although during the Nationalist advance to the north in the summer, he announced his adherence to

Kuomintang principles, he remained steadfastly opposed to Soviet influence.

During July, Yen moved eastwards into Chihli and occupied the important railway junction of Chentingfu on the Peking-Hankow railway. Chang endeavoured without success to bring him into the Northern fold with the object of making a combined attack on Feng Yu-Hsiang. At the end of September, Chang reinforced his garrison at Kalgan by two brigades. At the same time he also held up at Tientsin a consignment of arms destined for Yen. These measures were construed by Yen as hostile acts and he advanced from Shansi towards Kalgan early in October.

Subsequent information has made it clear that Soviet intrigues were responsible for the Shansi attack on Chang. It was hoped that Yen's attack would be successful but would leave him so weak that Feng would be able to advance on Peking without opposition. As Feng relies entirely on Russian support, the Soviet would ultimately profit by his arrival in Peking.

Unfortunately for the Russian plan, Chang was strong enough not only to withstand the Shansi attack, but to force Yen to withdraw in confusion back to his own province. On the Kalgan front, Chang at once ordered the forward troops to withdraw to the naturally strong position of the Nankow Pass, 30 miles north-west of Peking. Reinforcements from Manchuria were sent up to envelop the Shansi forces on either flanks.

On the Peking-Hankow railway front, Chang sent his son to Paotingfu, with orders to clear the railway and to compel the Shansi forces to withdraw from Chihli province.

These measures were successful, and by 15th October the Shansi forces had been heavily defeated on both fronts, and were in full retreat. Two Shansi raiding parties, one of which got within 18 miles of Peking, after holding out for a few days, were rounded up by Northern troops.

Thus Yen's attack proved a disastrous failure. At the end of the month fighting near the Shansi border south-west of Kalgan was still in progress, but discussions for peace terms were already in progress. It is still doubtful whether or not Yen will be able to remain in control of his province; Chang appears agreeable to allowing him to remain, provided he gives guarantees against a future sudden attack; it is,

however, possible that the province will be divided up amongst Yen's subordinates.

At the same time that Chang Tso-Lin's forces were driving back the Shansi armies, the Shantung troops of Chang Tsung-Chang commenced a movement westwards along the Lunghai railway against Feng Yu-Hsiang. Early in October, Feng had moved eastwards along this railway with the object of making an attack against Chang Tsung-Chang, simultaneously with a fresh Nationalist advance northwards along the Pukow-Tientsin railway. The latter failed to materialize and Feng then withdrew without fighting to Kaifeng. At the end of the month Feng was being attacked by 6 Shantung formations and was slowly withdrawing from Honan.

On the Pukow-Tientsin railway front no fighting occurred between the Northerners, under Sun Chuan Fang, and the Nanking Nationalists. The latter moved a considerable number of troops over to the left bank of the Yangtze preparatory to undertaking a fresh offensive, but for various reasons this offensive was not launched.

Thus the end of October sees Chang Tso-Lin even more firmly established in his position at Peking as Generalissimo of the Northern allies.

In Kwangtung there has been no further fighting this month. For the time being Chang Fak Wei, who arrived at Canton with a large army during September, appears to have settled down with Li Chai-Sum still in nominal control. Expectations that the latter would be turned out by Chang have not yet been fulfilled. There is, however, a recrudescence of Soviet activities in Kwangtung province. Chang Fak Wei was accompanied by a number of Russians, and many others have since arrived in Canton. An account from the Russian point of view of the amazing success they had in the years 1924-26 in organizing an efficient Cantonese army will be found on page 210. There is no doubt that a new attempt is about to be made by the Russians in this area towards organizing a fresh revolutionary Chinese army. This time the attempt is not being made to utilize existing forces as in the previous case, but the Russian efforts are being expended towards forming completely new armies from the Chinese peasant masses. The Russians anticipate that from two to four years will be required to form this new revolutionary army. As before, Kwangtung is to be the main centre and base of Russian activity in

South China. Fresh anti-foreign agitation must, therefore, be expected in this area in the near future.

2. *The Nationalist Split.*

Advantage was taken of the lull in the hostilities between north and south which occurred during October to undertake further attempts to bring about a reunion of the Nanking and Hankow nationalists into a homogeneous party. It will be remembered that during September a conference was held at Nanking for this purpose, but, owing to the absence of the Hankow leaders, this conference was a failure.

During October another conference was held at Hankow. Certain decisions were announced, including the reunion of the party, a combined attack on the north, and an invitation to Tang Sheng-Chih, the Hankow leader, to become commander-in-chief of the reunited forces. This conference, however, had no more real success than the former one. Immediately after its conclusion, Tang Sheng-Chih openly announced his independence of Nanking and the formation of a new government with himself at its head.

Thereupon the Nanking Government declared war on Hankow and commenced preparations to this end. Troops which had been taken across the Yangtze preparatory to a fresh advance northwards, were retransferred to the right bank; Cheng Chien, the Chinese general responsible for the Nanking outrages, was appointed chairman of the Nanking Government Military Council; and an expedition moving up-stream on both banks of the Yangtze was launched against Hankow. On the right bank Cheng Chien was personally in command with three armies which, after taking Wuhu, moved up-stream towards Anking. On the left bank, a smaller force attacked and captured Anking.

By the end of the month the advance on both banks had progressed beyond Anking towards Kiukiang, whilst the Hankow forces were preparing to stand at Wusueh, 25 miles above Kiukiang.

Gun-boats were also employed by Nanking on the river to assist the expedition, whilst Tang is reported to have mined the river above Wuhu.

Before the end of the month a fresh element was introduced into this, hitherto, domestic nationalist quarrel. That was the report that Tang Sheng-Chih had transferred his allegiance to the northerners. Negotiations to this end are now reported to be in progress

between Tang and Chang Tso-Lin. The quarrel between Nanking and Hankow has thus become merged into the older civil war between northerners and southerners.

6. *Reduction of British troops in the Far East.*

The reduction of the Shanghai Defence Force was continued when the 1st Bn. Cameronians, sailed for home on 15th October.

The Civil War.

The month of October closed with the defeated forces of Yen Hsi Shan being pressed back into Shansi province by the Northern troops of Chang Tso-Lin. During November, Chang continued to exert pressure on Yen, who was forced to yield ground on both northern and eastern borders of Shansi. In the north, Chang was able to occupy successively the important town of Tatung and the railway as far as Suiyuan. Thus Chang is now in control of the whole of the Peking-Kalgan-Tatung-Suiyuan railway, and Yen is deprived of the northern portion of his province. Further south, the Peking-Hankow railway was cleared of Shansi troops, who withdrew, after sustaining considerable losses, to the passes west of Chentingfu leading into Shansi. By the end of November, northern forces had pressed the Shansi armies back to the border, and had succeeded in forcing a way across two of the passes, and were continuing to move further into Shansi.

There has been no further report of peace discussions between Chang and Yen during the month; while up to the present time Yen has not been forced to relinquish his hold on the remainder of his provinces.

During the month the situation on the Lunghai railway has fluctuated. Following the attack, by Chang Tsung-Chang on Feng at the end of October, there was a short lull in the fighting on this front. Feng then counter-attacked eastwards, captured Kweiteh (80 miles east of Kaifeng) and threatened Suchow, the junction of the Lunghai and Tientsin-Pukow railways. The Shantung troops of Chang Tsung-Chang were, however, able to bring Feng's attack to a standstill and recaptured Kweiteh, and at the end of November were reported to be in Kaifeng.

On the Pukow-Tientsin railway front, Sun Chuan-Fang withdrew without fighting for some 60 miles. This was followed by a corresponding advance on the part of the Nationalists. Elsewhere there has been no fighting during the month.

The Nationalist Split.

By the end of October, the Nanking expedition, against Hankow had advanced to within a short distance of Kiukiang, moving up-stream on both banks of the Yangtze. The movement continued during November and Hankow was entered by the forces of Nanking under Cheng Chien on 16th November. Tang-Sheng-Chih, the Hankow Commander, fled from the city on 12th November, taking passage for Japan on a Japanese steamer. The command of the remnants of his forces devolved on Ho Chien, one of the army commanders. By the end of the month Ho Chien's troops were still withdrawing up-stream, and were scattered over the Yochow-Changsha area and in western Hunan, pursued by certain Nanking forces.

On 27th November, dissension occurred amongst the Nanking generals in Hankow. The quarrel arose over the appointments to various lucrative posts, each general wishing to secure these for his own nominees. As a result, Cheng Chien resigned and was succeeded by Li Chung Jen. The quarrel also led to the abandonment for the time being of the pursuit of Ho Chien's forces.

Above Hankow, Yangsen moved down-stream some 50 miles, peacefully absorbing one of the Hankow armies on his way. Up to the end of the month he had made no further attempt to attack or co-operate with the Nanking forces occupying Hankow, but is reported to have a detachment buying supplies in Hankow.

It will be remembered that conferences for the purpose of reuniting the various Nationalist factions were held at Nanking in September and at Hankow in October, neither of which succeeded in its object. Yet another attempt was made during November to reunite the rival groups of the Nationalist party. A conference was called to meet in Shanghai for this purpose towards the end of November. By this time, Chiang Kai-Shek, who fled to Japan in August, had returned to Shanghai, and was believed to be prepared to join up with the Nanking régime again. There was also a new Nationalist régime in Canton under Wang Ching Wei, an old revolutionary and friend of Chiang Kai-Shek. Thus the conference was to include representatives of the three existing Nationalist factions in South China—Nanking, Shanghai, and Canton. (Hankow had by this time ceased to count seriously).

The Canton representatives reached Shanghai on the 18th November. On the 24th November, however, apparently mutual jealousies once again intervened, and it was announced that the conference had been postponed indefinitely. Thus there is still no central Nationalist Government in South China, but three mutually suspicious régimes.

SITUATION AT VARIOUS CENTRES.

Shanghai.

Communist activities have increased during the month, and there have been many strikes, some of which are still in progress.

On 7th November, the tenth anniversary of the Soviet coup in Russia, a "White" Russian mob attacked the Soviet Consulate. The mob was received with revolver fire which caused some casualties. The Municipal police soon quelled the disturbance.

Hankow.

Shortly before Hankow fell, Cheng Chien who was commanding that portion of the Nanking expedition on the right bank of the river, was appointed to command the whole expedition. It will be remembered that Cheng Chien was responsible for the Nanking outrages of April, 1927. Considerable apprehension was, therefore, felt in Hankow by Chinese and foreigners alike, prior to the arrival of this notoriety.

As a precautionary measure the Japanese and French both landed additional armed forces to guard their Concessions. No British forces were landed in the ex-British Concession. With the exception of a few cases of looting by the retreating Hankow forces, however, up to the end of the month the city has been quiet and orderly under Cheng Chien's control.

By agreement amongst the Powers, all dealings with Cheng Chien have been avoided, in order to prevent any idea that the responsibility for the Nanking outrages has been forgotten or condoned.

The resignation of Cheng Chien has given rise to further anxiety in the city.

The administration of the ex-British Concession continues to cause difficulties. The new Chinese Director of the ex-British Concession has not yet been recognized, as his appointment was made contrary to the terms of the agreement under which we handed back the Concession to the Chinese.

Owing to sniping by the Chinese on British ships above Hankow it was found necessary to arrange convoys between Hankow and Yochow. Trade, however, continues to remain difficult and stagnant.

Canton.

On 4th November, a fresh anti-British boycott broke out at Canton. There were a number of uniformed pickets ashore, but none were operating on the river. Orders were given that naval action should be taken against any pickets that started to work afloat. Energetic protests were made and by 18th November it was reported that the situation was again normal.

Chinkiang.

On 4th November, two British employees of the Asiatic Petroleum Company were assaulted by Chinese soldiers while visiting the Company's premises at Chinkiang. A Chinese officer intervened in time to prevent serious damage. The local Commissioner for Foreign Affairs was ordered to apologize. He did so in person on board one of His Majesty's ships on 15th November and the incident was closed.

Nanking.

During the month, the company of Marines which had been guarding the International Export Company's premises at Nanking since August, 1927, was relieved by a company of the 1st Bn. Bedfordshire and Hertfordshire Regiment.

Fukien Province.

For some months the province of Fukein has been quiet. The Government was reorganized on moderate Nationalist lines during July, under the chairmanship of Admiral Yang Shu-Chuang. The province has remained under the control of the provincial Navy. The Navy is determined to maintain control, for which purpose the local naval officers are organized in two groups. These are the pro-Nationalist group under Admiral Yang, and the pro-Northern group under an Admiral Sah. In the interests of the Fukien Navy either group is prepared to take over from the other in a friendly way, according to the political developments on the Yangtze.

Yunnan.

The province of Yunnan continued to be in an unsettled state during the month, but no important British interests are involved in the purely local fighting.

Reduction of British Troops in the Far East.

The reduction of the Shanghai Defence Force was continued when the 13th Brigade Headquarters, 1st Bn. Border Regiment and 1st Bn. Middlesex Regiment sailed for home on 18th November. The 1st Bn. Northamptonshire Regiment and 56th Field Company, Royal Engineers, were moved from Hong Kong to Shanghai during the month.

China's Trade.

A table showing the division of China's foreign trade between the British and Japanese Empires and the United States of America during the years 1924 to 1926 is given below.

The following deductions can be made from the table :—

- (1) That whereas up to and including the year 1925 the total trade of the British Empire with China was greater than that of any other country, in 1926 our trade was surpassed by that of Japan.
- (2) That since 1924 the value of British trade with China (particularly as regards our exports to China) has consistently fallen, whilst that of Japan has been rising.
- (3) Although the value of the total trade of United States of America with China fell in 1925 and was no greater in 1926 than in 1924, yet the percentage of China's total which goes to the United States of America has risen consistently.

*The Situation.**1. Civil War.*

At the end of November the civil war situation was more or less stabilized on all fronts. These conditions obtained throughout December with minor exceptions. In the north there has been no fighting between Chang Tso-Lin and Yen Hsi-Shan, and Chang remains in control of the northern part of Shansi which he captured during November.

The Northerners have lost some ground on the Tientsin-Pukow railway. The fluctuating fighting east of Kaifeng on the Lunghai railway, which started during November, continued during December, and on 23rd December it was reported that Feng had succeeded in capturing Suchow, the junction of the Lunghai and Tientsin-Pukow railways. Reports were also received that the Nanking Nationalists were approaching this town, and there is no doubt that the Northerners have lost it, though the Nanking Nationalists have not yet joined hands with Feng owing to the serious damage done to the Tientsin-Pukow railway. Further east, the Northerners have also evacuated Haichow where the Lunghai railway reaches the sea.

Any further joint advance northwards by Feng and the Nationalists is unlikely for some months as, apart from mutual distrust, severe winter conditions are now prevailing, and a shortage of ammunition is reported.

In addition to these reasons, there have been signs during the month that the chief weapon used by all Chinese leaders in their civil wars—namely, cash—is becoming increasingly scarce. Each successive leader has endeavoured to squeeze the utmost amount of money out of the inhabitants of such areas as he happens to control, with the result that it is now becoming increasingly difficult to extract enough to pay for the barest necessities of an army.

For the time being, therefore, a quiet period as regards civil wars is not unlikely.

2. The Nationalist Split.

It was reported in the November issue of this summary that Cheng Chien, the Nanking general who was in command at Hankow, had resigned. His resignation does not appear to have been accepted, for he remains in control at Hankow. He appears to have come to some form of agreement with Ho Chien, who took command of the

remnants of the Hankow forces, after the flight of Tang Sheng Chih in November. These remnants have not been pursued by Cheng Chien farther than Yochow.

The Kuomintang conference for reunification of the party, which was postponed in November, was held during December in Shanghai. Delegates of the Nanking group, local Shanghai representatives, and Wang Ching Wei and Li Chai-Sum from Canton attended. From the first wide differences of opinion were evident, but eventually the moderate elements, realizing the critical state of the party, were able to arrive at certain decisions. The result was favourable to the Nanking group, whose leader, Chiang Kai-Shek, was once again appointed Chairman of the Military Council, and to all intents Generalissimo of the Nationalist forces. Orders for the arrest of Wang Ching Wei, the extremist from Canton, were given, but he appears to have made good his escape before they could be carried out. He is reported to have sailed for France on a French ship on 17th December, but this report lacks confirmation.

As a result of this conference, the local regimes at Hankow and Canton appear for the time being to be acting in agreement with, if not under the orders of the Nanking group. It has been arranged to hold a plenary party conference at Nanking between 1st and 15th January, 1928.

3. *The Expulsion of the Russians from Nationalist China.*

During the early part of the month it was clear that the danger of very serious troubles through Communist activities existed in the three cities of Shanghai, Canton and Hankow. On 17th December, immediately after the conclusion of the Shanghai Conference (and probably as one of the conditions under which Chiang Kai-Shek resumed office) a decree was published simultaneously by the local governmental regimes in Shanghai, Canton and Hankow. This decree gave orders that all the Russian consuls and their staffs in these towns should be expelled from China forthwith. The prompt execution of these orders is a measure both of the unity which was reached at the Shanghai party Conference and of the fact that the moderate elements at the Conference prevailed over the extremists.

By the end of the year all the Russian officials, accompanied by the majority of other Soviet personnel, had sailed for Vladivostok.

The action against the Russians was followed by drastic steps against Chinese Communists and all those in any way suspected of being in sympathy with the Communists. In Hankow and Canton Chinese "reds" were massacred wholesale, whilst a number of Russians were arrested and summarily executed. These Russians even included a few Soviet officials. These measures were taken, apparently, in revenge for the iniquities committed by the Communists whilst they were in power. This sudden break of relations and dismissal of the Russian officials and "advisers" from south China must be regarded as one of the most important events in Chinese history since Sun Yat Sen accepted Soviet aid in Canton in 1923. Feng now remains the only Chinese leader who openly countenances Russian advisers and accepts Russian help, but this is natural since, owing to the poverty of the area he controls, Russian supplies are vital to him.

In the north, Chang Tso-Lin has refrained from further violent measures against unofficial Russians. (It will be remembered that he broke off official relations following the raid on the Soviet Embassy in Peking in April, 1927). He is anxious to give no cause to Russia and Japan to come together in Manchuria, where Chang's difficulties with both do not tend to grow simpler.

4. *Situation in various centres.*

Shanghai.

For the past month Shanghai has been suffering from a wave of crime of violence and intimidation. Many strikes have been and are still in progress, mainly the result of Communist agitation.

Owing to intimidation and actual violence there has been a strike of tramwaymen during most of the month. A restricted service was put into operation under the protection of armed guards stationed on each tram. By the end of the month a normal service was resumed.

The state of nervousness in the Settlement was so acute, that the Municipal Council requested the British and Japanese commanders to institute a system of armed patrols in the streets, in order to restore confidence.

Canton.

It will be remembered that a *coup d'état* was carried out by Chang Fak-Wei in Canton in November, on the day after Wang Ching-Wei and Li Chai-Sum departed for Shanghai. Chang was accompanied by many Russians, and hundreds of Chinese Communists

were released from the prisons. On 12th December a Communist rising was staged under instructions from Moscoow. A Soviet form of Government was set up, and a reign of terror began, accompanied by looting, murder, and incendiarism. By the 15th December, however, the moderate element, represented by Li Chai Sum's forces, succeeded in regaining control of the city. Literally hundreds of Communists were executed including several Russians.

These troops only held the city for a few days, after which, in the absence of Li Chai-Sum in Shanghai, control of the city was obtained by Li Fuk-Lum. Li Chai-Sum's troops remained in the vicinity, and on 29th December again seized the city without fighting. Meanwhile Li Chai-Sum had arrived at Hong-Kong *en route* for Canton, and Li Fuk-Lum immediately went off to welcome him there. In view of Li Fuk-Lum's treacherous conduct during Li Chai-Sum's absence, his reception by Li Chai-Sum is doubtful. By the end of the month better conditions prevailed in Canton, where throughout the trouble no anti-British violence was reported.

Further east in Kwantung, Communist outrages continue, many executions taking place daily. Chang Fak-Wei withdrew with his extremist troops north-eastwards and is reported to be making for Fukien.

Hankow.

Throughout the month there was much anxiety owing to Communist agitation and a spasmodic outbreaks of disorder. The Government of Cheng Chien was accompanied by many Russians and a serious rising had been planned to take place on the 1st January. The danger of this was greatly reduced after the dismissal of the Soviet officials.

The Upper Yangtze.

Throughout the month a chaotic state of affairs was in force on the Upper Yangtze. For hundreds of miles no constituted authority was in control and bands of pirates and bandits infested the area. On 30th November the British s.s. "Siantan" was attacked by an armed band near Ichang and some of the crew were killed. Captain Lalor, in command of the ship, was carried off as a prisoner and held to ransom. With difficulty communication was established with the bandits through the voluntary assistance of a Scotch missionary Mr. Tocher. With great determination and courage Mr. Tocher paid,

several visits to rendezvous appointed by the pirates and, after considerable delays for bargaining, he succeeded in effecting Captain Lalor's release for the sum of 60,000 dollars (about £ 6,000) on 13th December. Captain Lalor had been kept on board a sampan under conditions of great hardship, rendered worse by the fact that, in trying to attract the attention of passing ships, he had accidentally wounded himself in the leg.

Tibet.

The presence in Lhasa of a party of Mongolians has been reported in this Summary since April, 1927. Coming ostensibly for religious purposes, it will be recalled that the party proved later to be a Bolshevik mission. With the exception of two unimportant members, the party left Lhasa northwards on their return to Mongolia on 5th December. The mission was entertained by the Dalai Lama before their departure, though His Holiness was not present at the entertainment in person. The mission does not appear to have achieved anything of importance during its stay in Tibet.

5. Reduction of British Troops in the Far East.

The reduction of the British forces available at Shanghai was continued when the remaining half of the battalion of Royal Marines sailed for home on 6th December.

DENMARK.

Progress of the work of deepening the Drogden Channel Entrance to the Baltic.

(1) The Drogden Channel forms the easternmost but one of the four entrances to the Baltic Sea. It lies to the west of the Island of Saltholm (between Malmo and Copenhagen), to the east of which is the Flint Channel. The other entrances are the Great Belt and Little Belt.

Before the deepening of the Drogden was commenced, the depth of water (at L. W. O. S.) available in the four channels was as follows :—

				Feet.
Flint	..	..	..	23½
Drogden	..	..	..	23½
Great Belt	..	..	..	33
Little „	..	..	..	36

It was originally proposed to deepen the Drogden to about 30 feet, but owing to the difficult nature of the bottom it has now been decided to increase the depth to 27 feet only.

The Little Belt may shortly be closed to large ships owing to a proposal to build a new road and railway bridge connecting Funen with the mainland.

(2) The work, which has been in progress for about $3\frac{1}{2}$ years, is being carried out partly by the State and partly by private contractors. As much as 8,000 tons of rock have been removed from the bottom, and pieces as heavy as 20 tons each have been blasted and dredged.

The length of the completed channel will be $6\frac{1}{2}$ kms., and the width about 250 metres.

It is hoped, weather and other conditions permitting, to complete the work by the end of this (1927) year.

ESTONIA.

Army Manœuvres, 1927.

1. Estonian manœuvres were held this year in the Petchori-Woru area (south of L. Pskov, near the Russian frontier).

They took the form of a series of exercises for commanders and headquarters of formations and units, and for the Intercommunication Service; formations and units themselves were represented by cadres only.

2. The ground in this area is of an open hilly nature, dotted with small coverts and detached farms. The inhabitants of the Petchori district are quite distinct from those of the Woru, and are, to all intents and purposes, Russians of a low, savage and almost criminal type. The principle tactical features of the area are:—

- (a) The River Piusa, a deep and, in places, swift river, which forms a very distinct obstacle to an invader from the east.
- (b) The Koteleva ridge, a bare outstanding feature astride the main Petchori-Woru road, about 5 kilometres west of the former, which commands the country to the east and which, if resolutely defended, would require a "set-piece" attack for its capture.

3. The first phase of the exercises, which extended from the 4th until the 8th September, dealt with the problems confronting commanders, staffs and intercommunication troops in a delaying

operation at the conclusion of which a counter-offensive is launched. The second phase dealt with the problems of a purely defensive battle.

"Kaitselit" or Estonian Civil Guard.

Origin and organization of the "Kaitselit."

1. The "Kaitselit," or Civil Guard, was founded originally in 1920. For the first 3 years of its existence, however, the movement made little progress, and it was not until 1924 that the Communist rising, which took place in Reval in December of that year, gave it a fresh impulse. Prior to this date the total strength of the "Kaitselit" was approximately 2,000. The collection of the necessary funds to enable a larger organization to be built up were the first steps in the work of re-organization. For this purpose a tax was levied on every citizen in Estonia, according to the scale of his income, and a sum of E. marks 200,000,000 was raised.

The aim of this organization is to include within its ranks the whole of the non-mobilizable manhood of the country, and its rôle to maintain internal order and to suppress Bolshevism. Service was to be compulsory for all males immediately before their conscript service and immediately after their period in the army reserve, when they were to receive some simple military training.

At present this organization has a total strength of 30,000, is under the general supervision of the Ministry of War, has its own chief who holds an independent command, and although he attends army conferences and as far as possible co-operates with the Chief of the General Staff on matters affecting mobilization, &c., cannot be dictated to by the General Staff of the Army.

Method and terms of enlistment.

2. Enrolment is on a voluntary basis, and can take place from the age of 17, each volunteer having to be vouched for by three existing members of the "Kaitselit." To encourage recruiting, service in the "Kaitselit" carries with it a reduction of the period of service in the army. This reduction of the term of conscript service varies in accordance with the efficiency shown while in the "Kaitselit," and is assessed by means of an examination which is held during the summer while training in camp. Individuals who pass out first-class from this examination are exempted 4 months conscript service; those

who pass out second class, 2 months, and those who fail undergo the full term.

There are no fixed terms of service : individuals remain or resign as they wish.

3. *Command and Instructional personnel.*

There are three categories of command and instructional personnel :—

Category 1.—Officers seconded from the army, of whom there are only 50, and who form the Headquarters Staff, at Reval and other important centres. They receive pay according to their rank in the army.

Category 2.—Officers from the reserve, on the retired list, nominated by the Minister of War for active service with the “Kaitselit.” They number 325 and, although unpaid, are given free travelling facilities and a small pension according to length of service.

Category 3.—Those who are selected as voluntary members.

4. *Rank.*

Rank as such does not exist. Appointment takes the form of rank, and the commanders of regiments and battalions each wear a distinguishing mark to denote their appointment.

5. *The composition of the “Kaitselit.”*

Infantry forms the main part of this organization, but there are also a few artillery, cavalry and machine gun units and armoured cars.

The regiment is the highest infantry organization and is complete with battalions, companies and sections. 15 regiments exist having a strength varying from 1,500 to 3,000 men. Battalions and companies vary in strength from 600 to 700 men and 200 to 300 men respectively.

There exists, also, an affiliated women's organization, known as “Kodu Katzi Uhing,” with a strength of 9,000. Its main duty is in connection with supply and medical work for the troops in the field.

7. *Training.*

Training is carried out three times a year—in the autumn, winter and summer. In the autumn tactical training takes place. In winter individual training, war games, battalion courses and lectures,

given by what is known as a "Flying School" organized by the Headquarters Staff, which goes from one area to another. In summer, field training in camps for a period varying from a fortnight to three weeks, often carried out in conjunction with the regular army, while officers of the "Kaitselet" are attached to units of the army during important field exercises.

There is a large camp at Verska on the shores of Lake Pskof, where newly enrolled volunteers and others are passed through every summer (in the summer of 1927, 20,000 men).

FRANCE.

Reorganization of the frontier defences.

(a) The institution of a Commission d'organization for the fortified regions.

A Decree of 30th September, 1927, constitutes a Commission charged with reporting to the Minister of War on all questions dealing with the type, the resistance and the armament of the defensive organizations, which are to be created on the north-east frontier.

This Commission is to replace the former Commission, which was engaged on studying the question of frontier defence; to ensure continuity, members of the new Commission and its secretariat will be chosen from amongst those working on the former Commission.

The new Commission is composed as follows:—

The Inspector-General of Engineers as President.

Two general officers, one from the infantry and one from the Metropolitan Artillery, who are to have no other command or appointment.

One of the Sub-Chiefs of the General Staff of the Army.

The Commission will be assisted by a secretariat under the direction of the artillery general, who is a member of the Commission. He will have under him a senior infantry, artillery and engineer officer and an *officer d'administration du service d'état major*. Specialist officers may be attached to the secretariat as required.

It will be remembered that the draft Budget for 1928 allots 54,300,000 francs for the reorganization of the eastern defences.

(b) Reconstitution of the Technical Engineer Committee.

A Decree of the 30th September, 1927, alters the composition of the Technical Engineer Committee, in order to effect closer liaison between this committee and the new *Commission d'organization* for the fortified regions.

The Technical Engineer Committee will be composed as follows :—

Seven Engineer-Generals, namely :—

The Inspector-General of Engineers.

The General Officer Commanding, Signal Troops and Services.

The General Officer Commanding, Transportation Troops and Services.

The Technical Inspector of Engineer Works.

The Permanent Inspector of Engineer Material.

The Technical Inspector of Fortification Works.

The Assistant to the Inspector General of Engineers.

Two Infantry Generals, one of whom is a member of the *Commission d'organization* of the fortified regions.

One General of Metropolitan Artillery, who is a member of the same Commission.

One General of Colonial Artillery.

The increase in the number of Engineer Generals is due to the appointment of the following officers to the Committee :—

The Technical Inspector of Fortification Works, whose appointment was sanctioned by a Ministerial Decree of the 9th April, 1927.

The General Officer Commanding, Signal Troops and Services (owing to the importance of signal communications in relation to permanent fortifications).

Proposed Re-introduction of pre-war Uniforms to Stimulate Recruiting.

The French military authorities are considering the reintroduction of the pre-war parade uniform. Authority has already been given for officers of Spahis, Chasseurs d'Afrique and Zouaves to wear the old uniform ; all non-commissioned officers and regular soldiers of these regiments are also to be issued with the old uniform, as far as existing stocks allow, for use on leave or when walking out.

It is understood that the proposal has been put forward by the recently appointed Inspector General of Long Service personnel, in order to stimulate the recruiting of regular personnel. The proposal is of interest, in view of the difficulty of obtaining the extra regular personnel required under the re-organization proposals.

Communist Activity in the French Army.

In continuation of *Military Intelligence Summary*, Volume II, No. 3, July, 1927, page 91 and No. 4, August, 1927, page 129.

Heavy sentences have been recently inflicted for anti-militarist propaganda.

Amongst others, M. Duclos, Deputy for the Seine Department and Manager of "La Caserne," was sentenced to 30 years' imprisonment and a fine of 18,000 francs for publishing articles inciting soldiers to mutiny. M. Marty, another Deputy, was sentenced to 10 years' imprisonment and a fine of 6,000 francs. Four other journalists were sentenced to 3 years' imprisonment and fines of 2,000 francs. M. Bellenger and M. Michelet, the latter of "l'Aube Sociale," receive similar sentences in default.

An action was brought against the Limoges Communist paper "Le Travailleur du Centre," charging it with publishing defamatory articles against the garrison.

Early in October, the French Police seized 43,000 copies of "Le Conscrit," which had been made up into packets for issue to men of the annual class, due to join the colours this autumn. The manager of the paper has been arrested and charged with inciting to disobedience.

NOTES ON MILITARY REVIEWS.

"REVUE MILITAIRE FRANCAISE."

October, 1927.

(Published by Berger-Levrault. Price 5.50 francs.)

1. *Douaumont during the German Occupation (II)*. (To be continued.) (One sketch map.) By General Rouquerol. Of interest.

Mainly deals with the situation of the German garrison told off to hold the fort when their offensive, for strategical reasons, ceased on 2nd September. The description of the state of the fort, and the steps taken to reorganize it are interesting.

The attacks carried out prior to that date, viz., in May by the 5th Brandenburg and subsequently by the 2nd Bavarian Divisions, are also interesting from the trench warfare point of view.

2. *The Qualities of a Commander. Part I.* By Colonel Lucas. Of interest.

A psychological study of the qualifications essential to a successful commander. The scope of his duties are summarized as "to formulate a plan, to direct, and to administer." The writer considers these qualities from the standpoint of the higher and the subordinate commander in turn.

Some examples are given of the views of certain world-famous generals on the essential attributes of a leader. Marshal Saxe, for instance, says valour, intelligence, and spirit, health and a well-ordered "douceur." The latter evidently appeals to the author who classifies it as "une qualite bien Francaise." Napoleon's mention of Davout was "This Marshal has shown great bravery and force of character, the first essential qualities of a leader."

3. *Horse and Motor.* By Commandant Janssen. Of interest.

This excellent paper gives many useful figures concerning the movements by rail and automobile of a French division, and the availability of lorries, vans and small tractors on mobilization. The author, though apparently an ardent adherent of rapid mechanization eventually comes to the conclusion that mechanization must be gradual, and start with rearward echelons, reserve formations and supply columns. He goes at some length into the possibilities of mechanizing certain combat transport. This article is well worth reading.

4. *The Serbian Victories in 1914. Part II.* (Continued.) By Commandants Desmazes and Nacoumovitch. Of interest.

Discusses the preliminary movements of the Serbians and Austrians from the crossing of the River Drina to 15th August, 1914. Though mostly purely narrative, attention is directed to the dilatory methods of the Austrians after crossing the river, and to the separation of their artillery and infantry in the attack on the Tser plateau by the 21st Division. A concise but clear description is also given of the initial Serbian movements.

5. *Repression of Military Crime in the Roman Armies.* By Capitaine Andrieux. Of historical interest only.

A good account is included of the system of decimation.

Army Reorganization. (Reference, M. I. S., Vol. 10, No. 4, February, 1927, page 148).

(a) *Disbandment of Infantry Divisions.*

Notices in the "Journal Officiel" show that the headquarters of the following divisions have been disbanded as part of the reorganization scheme :—

28th Division	..	..	..	Lyon.
30th	„	..	..	Toulon.
31st	„	..	..	Montpellier.
35th	„	..	..	Bordeaux.

(b) *Formation of an Expeditionary Force in France.* ("Force Disponibles.")

The Colonial Expeditionary Force stationed in France in peace is to consist of 5 Divisions :—

2 North African Divisions.

2 Sengalese Divisions.

1 Indo-Chinese Malgache Groupement (equivalent to a Division).

Notices in the "Journal Officiel" show that the following are in process of formation :—

1st North African Division	..	Lyon.
„ Sengalese Colonial Division	..	Bordeaux.
2nd Sengalese Colonial Division	..	Toulon.

The Sengalese Divisions will each have two Infantry Brigades, each of two regiments, making a total of 12 instead of the normal 9 battalions to a Division.

(c) *Other Colonial units stationed in France.*

There is to be one White Colonial Division in France, in addition to the 20 White Metropolitan Divisions. This division will probably act as a depot for White French Colonial units overseas.

(d) *Disbandment of Units.*

Ten French machine gun battalions, a disciplinary *Battalion d'Afrique* and a North African Infantry Regiment were disbanded during October.

(e) *Composition of Divisions on the Italian frontier.*

Divisions on the Italian frontier are being raised to an establishment of two infantry brigades (12 battalions) in place of the normal 9 battalion organization.

The 29th Division at Nice has had the higher establishment for about a year; the 27th Division at Grenoble is now being strengthened.

The 2nd Sengalese Colonial Division at Toulon is also on the higher establishment (*see (b) above*).

Military Training (Games).

Last August a War Ministry decree forbade serving soldiers to take part in games and athletics organized by civilian associations; this caused some alarm as it was taken as a proof of the hostility of the military authorities to games.

A new circular has now been issued, taking the first step in making games a part of the regular training of the French soldier. Especial emphasis is laid on football and cross-country running, owing to their value for military training. Three military championships are to be created in France; for association football, Rugby football, and cross-country running. Every regiment or other self-contained unit will take part in these sports and the formation of teams will be compulsory. The army corps will be the unit of competition; eliminating matches will be held to decide which team shall represent the army corps, and the championship matches will be between the army corps teams. Finally, the winners of the army championships may meet those of the civilian championships, and facilities will be given for the training of army teams for international matches.

It may be added that since the recent visit of a party of Saint-Cyr cadets to Sandhurst, the officers of Saint-Cyr have been ordered for the first time to take part in games with the cadets.

Illiteracy in the French Army.

In a report on the Budget of the Ministry of War, stress is laid on the considerable increase of illiteracy amongst French recruits since the war; there is an increase in one region from 3.5 per cent. in 1912 to 11 per cent. in 1927. The question is serious, as with the short period of service, the whole of the soldier's time must be devoted to military training.

Communist Activity in the French Navy.

During the discussions on the French Naval Budget, the Communists and Socialists demanded to send a Parliamentary Commission of Inquiry to Toulon, to enquire into the recent mutiny in the

"Ernest Renan" and at the naval prison. The Minister of Marine replied that the Communists merely desired to destroy discipline in the Navy, by means of the Parliamentary Commission. The proposal was defeated in the Chamber by 371 votes to 150.

ARMY REORGANIZATION.

(a) *The Budget for 1928 (discussion in the Chamber of Deputies).*

This is the first budget to be presented in view of the reorganization of the army, that is to say, of a smaller peace army performing a shorter active service and consisting of 20 active peace divisions with necessary ancillary troops, and of an essential but small expeditionary force together with local garrisons for policing France's very large overseas dominions.

Such a change of organization is impossible without considerable expenditure on the provision of stronger cadres, improvement of accommodation, a more adequate training of reserves, and of a general shuffle round of existing forces. All these things cost money.

The discussion on the military budget began in the Chamber of Deputies on 2nd December and finished on 5th December, all the articles of the Government's project being adopted by 325 votes to 194. M. Bouilloux Lafont, the rapporteur who opened the debate, explained the causes for the augmentation in the credits asked for; these may be summed up as follows:—

- 50 per cent. directly or indirectly due to the reorganization scheme;
- 20 per cent. to increased cost of supplies, equipment, forage; and,
- 30 per cent. to renewal and completion of armaments, fortifications and other services.

The following are the chief points of interest in the debate:—

(i) *Two deputies protested against the yearly convocation of reservists, their misuse during the training period and the waste of time involved in their assembly and dispersal.* Discussion of this point brought out a good deal of detailed information on the subject of disciplinary troubles which arose during the 1927 training season, which clearly showed that these outbreaks were engineered and led by communists or their tools. In reply, the Minister for War stated that the annual training of reservists is an integral and necessary feature of the new army organization and cannot possibly be dropped. He attributed

the disciplinary troubles experienced partly to communist agitation, and those of an administrative or training nature to the experiment of training reservists in complete units, without sufficient active cadre for supervision and assistance. Steps are being taken to remedy these defects and to reduce the total of the early periods to 21 instead of 25 days, the men going direct from their civil employment to the camps, without passing through any intermediate depots for equipment.

(ii) *A protest against credits for the troops in Morocco and Syria*; in the former case based upon the ransom for M. Steeg's nephew and the threats of a punitive expedition against the tribes concerned; in the latter case on the dilatoriness of the French Government in finding a *modus vivendi* in that country as compared to the British in Palestine.

(iii) *A protest against retaining 311 generals on the active list*, in view of the fact that the future army on mobilization will evidently consist of some 66 infantry divisions only, which according to the views of those objecting could be staffed with a considerably less number. The debate elicited the fact that all the generals on the active list plus the 800 on the reserve list (except a few considered not sufficiently efficient) will be needed on mobilization of the National Armies.

(iv) *Some interesting, if true, disclosures about French military prisons and protests against the present court-martial organization*. The latter question will shortly be discussed by a Commission.

(v) All the Communist group registered a violent *protest against the Secret Service credits* alleging that these were largely used for spying on the syndicated trades union agents in the army and its services. The Government gained the vote on these credits by a large majority.

See also Monthly Intelligence Summary, Vol. II, No. 3, for July 1927, page 93.

(b) *Notes on Colonial Military Budget for 1928*.

In the draft Colonial Military Budget for 1928 there is an increase asked for of over 77,500,000 francs. This increase is chiefly due to the constitution of new units in Indo-China, to the increase in permanent cadre in connection with the new law of organization of the army, and to the expenditure on the defence of Cape St. Jacques and Saigon (see Monthly Intelligence Summary, Vol. 11, No. 3, for July, 1927, page 94).

The military effectives paid by the Colonial Budget total 51,667 all ranks, as compared to 48,951 in 1927. Besides a small increase in the number of officers, there is an increase of 2,800 in Indo-China, otherwise there is little difference. The proportion of white to native is 1 to 3. The distribution of all ranks territorially is as follows :—

Indo-China	..	..	25,110
West Africa	..	..	17,553
East „	..	..	5,100
Equatorial Africa	..	..	2,987
Antilles ..	..	..	653
Pacific ..	..	..	264

The “Rapport” on this draft Budget gives some interesting information on the subject of a colonial rearmament programme, which apparently is being taken seriously in hand. The following increased approximate demands are shown under the heading of Services of Artillery and Military constructions :—

			Francs.
West Africa	..	..	3,500,000
Indo-China	..	..	2,000,000
East Africa	..	..	1,750,000
Equatorial Africa	..	..	500,000

These appear to be a portion of an 8 years’ programme for the issue up-to-date of light automatics, armoured cars, tanks and 75-mm. Schneider mountain guns, according to the localities where they are most required. The “rapport” goes at some length into the reasons for the large expenditure shown in the Indo-Chinese group. It states that the situation in China, owing to its instability, has necessitated far-reaching reorganization of the local defence system and increased effectives. In 1925-26, 37,000,000 francs were devoted to rearmament of the existing effectives as regards automatic weapons ; the creation of an extra battalion, three extra groups of artillery, and of certain ancillary detachments such as aviation, tanks and armoured cars. The total sum thus expended by the metropolitan and colonial budgets combined for 1925-26-27 amount to 180,000,000 francs. The projected 1928 credits envisage the creation of an extra battalion, four companies of native scouts, an extra group of artillery, extra ancillary units and the reorganization of the defence of Saigon and Cape St. Jacques. It is anticipated that these services will call

for an expenditure of 55,000,000 francs, which will presumably entail assistance by the metropolitan budget. If this is granted, it appears that the expenditure in the four years under consideration from 1925-28 will amount to some 235,000,000 francs.

TRAINING OF RESERVE STAFF OFFICERS.

(a) A Decree of 7th December, 1927, published in the *Journal Officiel* deals with the constitution of a reserve of staff officers, and the training of selected officers of the reserve for appointments as staff officers in war.

(b) A reserve of staff officers is to be formed from :—

- (i) P. s. c. officers on the reserve ;
- (ii) Selected officers of the reserve over the age of 30 ;
- (iii) Officers of the reserve who served for not less than six months during the war against Germany in staff appointments.

(c) Commanders of formations are to encourage reserve officers, of at least 28 years of age attending refresher courses ("Cours de perfectionnement"), to apply to be considered for appointment to the reserve of staff officers. Such officers must give a guarantee to remain in the reserve of officers for 5 years. Applicants, whose education and regimental experience justify it, will carry out a probationary course of a fortnight's duration under the chief staff officer of the division or area nearest the officer's residence. The probationary course is to consist of instruction in staff duties in the field only.

(d) On the reports obtained on the probationary course, officers will be selected by the Minister for War to undergo a course of at least 3 weeks at the Staff College. This course will be held annually in September ; it will consist of instruction in staff duties and visits to military establishments, and will count as the officers obligatory training for the year. On its conclusion, officers obtaining a satisfactory report will be placed on the reserve list for staff employment.

(e) The further training of such officers will be effected by (i) refresher courses ; (ii) periods of instruction. Refresher courses will be held at nine centres (Paris, Lille, Nantes, Bordeaux, Toulouse, Marseilles, Lyon, Nancy, Strasbourg) conducted by selected p. s. c. officers working under the direction of the Commandant of the Staff College. (It is understood that these courses will consist of voluntary lectures, exercises and correspondence classes). The "periods of instruction" will consist of attachments to the staff of formations or attendance at tours carried out by the Staff College.

EXTENSION OF AGE LIMIT FOR GENERAL OFFICERS SERVING ON THE SUPERIOR WAR COUNCIL.

1. The French Government in the autumn introduced a measure extending the ages of retirement for senior officers in the Army. The main results of the Bill would have been to slow up promotion throughout the Army and to maintain the existing personages on the Superior War Council.

2. This Bill met with strong opposition in the Army Commission of the Chamber ; the main objection was based on the necessity for comparatively young army commanders for war.

3. As a result of the opposition, the Government accepted a compromise measure which has now passed into law.

Under the new law, members of the Superior War Council may be maintained up to an age limit of 65 ; such officers will be " hors cadre " and thus will not delay promotion ; the vice-president of the Superior War Council, who will be commander-in-chief in war, may be retained up to the age of 68 ; all other officers are to be retired at the ages laid down in the 1920 law (*e. g.*, 62 for general officers).

4. The importance of this question is due to the fact that members of this council are designated to command armies in war. In peace each member has a permanent staff, which is a nucleus of his wartime staff.

5. Under present conditions an officer, if well placed, reaches the rank of colonel at the age of 50 ; he seldom completes tenure of a command or a corps before he is 60 or 61. He cannot become a member of the council until he has qualified as a corps commander. Hence, if he is to retire at 62, he would only serve 1 or 2 years on the council. It is considered, to make the council effective and to enable the generals to train their staffs, a member should serve a minimum of 4 years. Continuity of policy is considered essential for national defence.

6. It may be noted that generals who acted as army commanders during the war may be retained up to the age of 70 ; this will come to an end in January, 1929.

French Army Uniform.

Reference Military Intelligence Summary, Vol. 11, No. 6, October, 1927, page 219.

The new uniform for the army has now been selected by the special commission charged with this duty. It is stated that khaki is to be retained for the tunic, but that the breeches are to be pearl grey. The kepi is to be revived—not, however, in its historical form, but of hard felt with a horizontal peak, like those worn by our telegraph boys.

The pre-war uniforms will apparently only be worn by North African troops.

Army Cooking.

The *Journal Officiel* of 4th December contains a private members Bill, providing for the appointment of a master cook in regiments and independent units; the master cook to rank as a company serjeant-major. The proposal is based on the difficulty of obtaining personnel adequately trained for cooking, with one year's service; it is also intended probably to stimulate the recruiting of regular personnel.

Communist Activity in the French Army.

Further evidence of anti-militarist activity has been obtained owing to the arrest of a municipal dispenser at Athismons. Documents seized were examined by an officer of the General Staff and found to relate to national defence; the documents are now being examined by the Ministry for War.

November, 1927.

1. *Douaumont during the German Occupation—Part III.*

By General Rouquerol. (To be continued.)

Of interest. A description from the German point of view of the French attack in October. The experiences of the three German divisions, occupying the ground of which Fort Douaumont was the key, are followed. The French artillery bombardment began on 14th October, and continued until the attack on the afternoon of 24th October. Graphic descriptions are given of the effects of the bombardment and the weather; the difficulties of obtaining information, and of supply; the statements of French prisoners and a deserter; and of the moral and health of the troops. The attempts to launch counterattacks, first by a battalion, and then by a division, are of special interest. By the evening of 25th October the Germans recognised that they had lost Fort Douaumont.

2. *The Serbian Victories in 1914—Parts III and IV.* By Commandants Desmazes and Naoumovitch. (To be continued.)

Of interest, as a study of the action of large forces in mobile warfare. A historical narrative from the Serbian point of view of the battles on 16th-19th August, 1914. The sketch map gives no idea of the influence of the ground on the operations.

3. *The Qualities of a Commander—Part II.* By Lieut.-Colonel Lucas.

A clear analysis of the intellectual, professional and moral qualities required for high and subordinate command. For high command a creative imagination, based on the knowledge of human nature, guided by prudence and daring, with a strength of will to achieve one's object: details to be left to the staff and well selected advisers. For subordinate command eye for ground, initiative, technical knowledge and the power to teach are essentials. The influence of personal example is emphasised. A man may be a successful subordinate commander, but may not have the breadth of vision or knowledge for high command.

4. *To Study the Art of War: the Study of the Campaigns of Napoleon.* By General Canon.

Some notes on the political object, the plan, and the execution of the plan, in the case of the campaigns of 1796 (first phase), of 1814 in France, and of 1815 in Belgium.

5. *Troops for Mountain Warfare in the German Army.* By "X".

In 1914 Germany had no troops trained in mountain warfare. Experience on the Italian and Salonica fronts during the war showed the difficulty of improvising such troops. A summary is given of the present German peace organization for mountain warfare, an organization for war, and some tactical points.

December, 1927.

1. *Douaumont during the German Occupation.* By General Rouquerol. (Concluded.)

The experiences of the German garrison during the French bombardment, 18th-24th October, 1916, are described. The conclusions drawn by the author on these operations include, criticisms of the

counterattacks launched by the Germans ; the effects of gas shelling, especially on transport horses ; the value of Douaumont Fort itself—the power of resistance of concrete ; the necessity for adequate defence against gas and proper ventilation ; the provision of a distant underground means of communication with such forts, and the importance of a definite detail of special garrisons.

2. *A Study of the Defensive.* By General Brosse.

Of interest. The author contends that French regulations and training in defence are restricted to the methods successfully employed during 1918 ; notably on 15th July in Champagne. The value of surprise and hence constant change in the tactics of the defence is not sufficiently recognised. A clear analysis is given of the possible results of the withdrawal of the troops from the outpost zone as laid down in the regulations, and of the rôle of the artillery in the defence, and of outposts main zones of resistance. The main lessons of the great attacks of 1918 are shown to be timely disposition of reserves, early intelligence, adequate strength and preparation of counterattacks. Defence must be looked upon as an elastic manoeuvre, the success of which will depend on early information as regards the enemy's intentions and the concealment of our own dispositions. The influence of the air, tanks and gas on the tactics of the defence is not mentioned.

3. *The 2nd Infantry Division of the Prussian Guard, 21st and 22nd August, 1914.* By Commandant Maury. (To be continued.)

A historical narrative compiled from German, Belgian and French sources. The 2nd Infantry Division of the Prussian Guard formed part of von Bulow's II Army. Its task on 21st August was to secure the crossing of the river Sambre at Auvélais (8 km. east of Charleroi). The author describes an interesting case in which Ludendorff, as staff officer, decides a difference of opinion between two divisional commanders and authorizes the commander of the 2nd Prussian Guard Division to attack and cross the Sambre in spite of von Bulow's orders to the contrary.

4. *Infantry and Tanks.* By Colonel Velprey.

An interesting and clear study of co-operation between tanks and infantry.

5. *In French Morocco in 1925 : The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (To be continued).

A clear summary of the operations from July, 1925, when the prestige of Abd-el-Krim was at its height, through the hot summer months, to the winter, when the military situation was restored.

6. *The Paris Motor Show, 1927.* By Lieut.-Colonel Dumenc. Of little military interest.

7. *The Centenary of the Battle of Navarino, 20th October, 1927.* By Lieut.-Colonel de Nerciat.

A historical note.

IRAQ.

The King.

The King arrived in London on 20th October to open discussions regarding the general question of Anglo-Iraqi relations.

Iraq-Syrian Boundary.

The survey of the Iraq-Syrian frontier between Jebel Sinjar and the Euphrates has been completed.

Anglo-Iraq Treaty.

A new Anglo-Iraq Treaty to regulate the relations of the two countries in supersession of the Agreement of 1922, was signed in London on 14th December.

ITALY.

Army Estimates.

The Italian Army Estimates 1927-28, as compared with the actual expenditure of the preceding year, are as follows :—

—		1927-28.	1926-27.	Difference.
		Lire.	Lire.	Lire.
Ordinary ..	..	2,432,731,300	2,421,000,000	+11,731,300
Extraordinary ..	..	341,927,745	345,192,746	-3,265,001
Total ..	..	2,774,659,045	2,766,192,746	+8,466,299

In 1926-27 the Estimates were as follows :—

		Lire.
Ordinary ..	..	2,230,207,000
Extraordinary ..	..	345,193,000
Total ..	..	2,575,400,000

Expenditure in this year therefore exceeded the estimates by 190,792,746 lire.

The totals for the 2 years are made up as follows :—

—				1927-28.	1928-27.	Difference.
Army	..	..	..	1,806,981,300	1,797,949,700	+9,031,600
Carabinieri	..	..	..	511,000,000	462,142,800	+48,857,200
Pensions, &c.	..	..	..	456,877,745	506,100,246	-49,222,501

The large increase in the Carabinieri and almost exactly corresponding decrease in pensions has been produced by the transfer of the allowances due to the personnel of the Carabinieri from the accounts of that force to the Pensions account.

The sum of lire 1,806,981,300 allotted for ordinary expenditure on the army is grouped under the following headings :—

1. General expenses	14,545,300	12,820,300	+1,725,000
2. Officers	430,130,300	433,050,000	-2,919,700
3. Civil employees	42,919,700	46,225,000	-3,305,300
4. Other ranks	855,410,000	839,735,000	+15,675,000
5. Animals	128,800,000	130,200,000	-1,400,000
6. Artillery, engineering and M. T. material.	180,700,000	168,915,000	+11,785,000
7. Buildings and works.. ..	42,700,000	50,400,000	-7,700,000
8. Miscellaneous	77,776,000	82,316,000	-4,540,000
9. Unallotted funds	34,000,000	33,288,400	+711,600
	1,806,981,300	1,797,949,700	9,031,600

The following are the principal increases and decreases shown under detailed headings :—

2. *Officers*.—The decrease in expenditure of lire 2,919,700 is chiefly due to a general decrease in allowances granted to officers.

3. *Civil Employees*.—This decrease is also chiefly due to certain allowances being abolished.

4. *Other Ranks*.—The increase of lire 15,675,000 is mainly due to :—

(a) Rise in cost of foodstuffs.

(b) Movement of troops.

(c) Re-enlistment bonuses and fixed allowances to N.-C. O.'s.

5. *Artillery Engineers and Mechanical Transport*.—The increase of lire 11,785,000 is chiefly due to increased expenditure for the M/T service, renewal of motor lorries, machinery, raw material, workshop expenses and labour.

6. *Buildings and Works.*—The decrease of lire 7,700,000 is due to minor expenditure incurred for maintenance and improvements of military buildings, military offices and rifle ranges.

7. *Miscellaneous.*—Decrease of expenditure on the following items:—Medical assistance, instruction, telegraph, telephone and postal services, repairs to cycles, minor expenses, &c.

The average rate of exchange for the year 1927 is 89 lire to the pound sterling.

MOROCCO.

French Zone.

The situation remains generally quiet.

Mulai Yusef, Sultan of Morocco, died on 17th November, and was succeeded by his third son, Sidi Mohamed, aged 18, who will take the name of Mulai Mohamed.

It is of interest that one of the new Sultan's elder brothers, Mulai-el-Hassan, who has been passed over, is at present Khalifa of the Spanish Zone.

The two parties of French settlers captured by bandits in the Middle Atlas, have been released after payment by the French authorities of the huge ransom of 7,000,000 francs in silver.

There was some fear that this payment by the French might lead to a serious loss of prestige. Actually the French appear to be profiting by the incident. Negotiations for the ransom brought the French for the first time into direct touch with certain tribes (the Ait Shokman) of the Middle Atlas, who had hitherto always refused to deal with the French. All sections of this group of tribes took part in the negotiations, in order to ensure having a share of the booty. The French are thus at liberty to deal with the group as a whole.

The French are playing on the tribesmen's superstitious nature and have proclaimed the ransom money as "accursed."

The tribesmen were solemnly warned that they would pay dearly for the money, and would have no peace until it was refunded. The French have now doubled their posts on the boundary of the Ait Shokman country, and intend to blockade the district until the tribes submit.

The tribes of the High and Middle Atlas are dependent on the fertile plain for corn and other necessities, and their only outlet for supplies has now been cut off.

Aeroplanes have flown over tribal territory threatening military action.

Spanish Zone.

The situation remains quiet. Every endeavour is being made to complete the main arterial roads before the bad weather sets in; considerable difficulty has already been experienced in supplying advanced posts in roadless districts, owing to heavy rain.

The Melilla—Sheshewan—Tetuan—Ceuta motor road is now open for traffic.

All infantry and sapper-miner expeditionary companies have now been repatriated. The strength has also been reduced by granting 4 months' leave to Spanish conscripts of the second group of the 1926 class, belonging to Permanent corps in Morocco.

A Royal decree of 31st October, places the civil administration of Ceuta and Melilla directly under the High Commissioner, instead of being controlled by military governors. This is of interest as foreshadowing the gradual substitution of civil for military control in the zone.

His Majesty's Ambassador at Madrid recently visited the Spanish Zone and was much impressed with the type of Spanish officer employed in Morocco. He considers the Spaniards are proceeding on sound lines in their relations with the Moors, whose religious susceptibilities and customs are being scrupulously respected. No Christian troops are quartered in Sheshewan, which is a holy city to the Mahommedans, and no Christian is allowed to set foot in the town after 6 p.m.

French Zone.

The situation remains generally quiet; a small party of Sengalese were attacked in the Ouergha district, north of Fez, and two men killed. To avoid further kidnapping cases, regulations have been issued to restrict the movement of Europeans in the dangerous districts on the borders of the French zone. In Southern Morocco, the French Administration has scored a considerable success; the Ida Watana tribes, comprising some 7,000 families in the Mogador-Agadir region, have made their submission. This will greatly facilitate the construction of roads and communications in this district.

Spanish Zone.

General.

The situation remains quiet. The collection of arms is continuing and 1,000 rifles were brought in during November. The forces in

Morocco have been reduced to 90,000, and this is intended to be the maximum garrison in the future.

Experimental mountain unit.

A special mountain unit is being raised from native soldiers in the Eastern Zone, for service in the Southern Riff ; if successful, a second unit will be raised for the Ghomara.

The men will be issued with skis and special waterproof clothing.

The need of such units has been acutely felt during the bad weather in Morocco, when many advanced posts were cut off by deep snow.

PERSIA.

Conscription.

The result of compulsory recruiting in the Kazvin district for the year 1926-27 is said to have been—

Number of those who drew lots . . . 3,550

Number taken for military service . . . 1,076

Persia-Soviet Agreement.

As a result of protracted negotiations between the Persian and Russian Governments, a Neutrality Pact and a Trade Agreement, on much the same lines as those already concluded between Russia and Turkey, were signed on 1st October and ratified on 21st October.

Concurrently with the above, agreements were signed under which the Caspian Sea fisheries controversy was settled by the establishment of a joint Russo-Persian company to work the fisheries ; the Port of Pahlevi was returned to Persia, and " most favoured nation " treatment was mutually accorded in customs and tariff questions.

Conscription.

Conscription ceased in Teheran on 12th November. It is reported that out of a total of 3,342 called for, 1,111 were taken. The latter were, however, given a certificate stating that, although they had been conscripted, they would not be called to the colours for the time being. This action is presumably taken by the authorities to avoid precipitating demonstrations in the Capital in sympathy with those that have taken place in other parts of the country.

SOVIET UNION.

DEMONSTRATION OF THE PREPAREDNESS FOR DEFENCE.

Leningrad, 5th.

During the International Youths' Day, Leningrad was marked by a magnificent demonstration organized by the workmen under control

of the Komsomoltsi organization. Processions commenced punctually at 12 o'clock, and the march past of the young men continued until 3 o'clock.

The first procession consisted of young men from the Putilov factory, and had at their head a detachment of infantry, which called forth enthusiastic applause. Not only the huge factories such as the "Red Putilov," "Trengolnik," "Skorohod," "Baltiski," which have thousands of Komsomoltsi cells, created infantry, medical and chemical and other groups and detachments, but also the smaller works and, factories, such as "Ravenstvo," "Krasnaya Zvezda," "Promet," "Stenka Razin" Typography, tram parks, telephone stations and others, demonstrated first and foremost their preparedness for defence.

Works after works, over a period of 3 hours, displayed disciplined ranks of pioneer detachments of Komsomoltsi columns, chemical, medical and infantry groups and detachments. Some works, such as the "Proletariat" and others, have whole companies of infantry. In each area were noticeable strong detachments of young cyclists—the future scouts.

There was special attention (which called forth a long and loud ovation), for the detachment of young Chinamen, who are preparing for a war against their own and international bourgeoisie. ("Krasnaya Zvezda," No. 202 of 6th September, 1927.)

"Trial Mobilization"—Test of War preparedness.

Recently in some areas of the S. S. S. R. trial mobilizations have been carried out for those subject to military law. Our military correspondent received the information about the object and the problem relative to the trial mobilization. The fundamental problem of the test mobilization first and foremost is a periodical organized confirmation of the preparedness of war of the Soviet Republic. The work, which aims at training the population of the masses of the country in strengthening the defence of the S. S. S. R. like all other responsible work has to be tested. The commencement in some areas of this test mobilization takes the place of an examination of fitness for mobilization, such tests of mobilization again serves to give experience and bring out the valuable lessons and eliminate irregularity and inaccuracy. Test mobilization is of special importance at the present moment when the international situation is highly critical, when the Imperialistic powers are feverishly preparing for war and finally when the question

of a preparedness for defence of the frontiers of the Soviet State, has become the most important question of the day. Therefore, the carrying out of the trial mobilization and its results is the best indication of the will of the masses of the workmen and peasants. How is a trial mobilization to be carried out? First and foremost a trial mobilization should correspond as near as possible to an actual mobilization. Only under these conditions can a genuine test of preparedness for mobilization be obtained. If the trial mobilization is not carried out seriously by those who are being called up, by inaccurate and deficient attendance, it does away with the practical mobilization and does not enable us to gauge accurately the defensive preparations of our country.

A trial mobilization includes the calling up of those liable to military service, also the organization of horses, carts, transportation, &c.

At the end of the mobilization those who are liable to military service disperse to their homes. The area and time to be called up is decided by the Soviet of Work and Defence. Horses, carts and harness are returned to their owners with a payment for use of horse and cart as laid down on a definite military price—2 roubles for 24 hours is paid for the use of a horse (for the use of harness and cart 1 rouble for 24 hours).

In a trial mobilization the responsibility problem rests on agricultural organization and co-operative societies. The subsidy of industrial and trade workers during mobilization period is demanded from these bodies. The liaison with the military authorities, of the Supply and Co-operative Societies, and of all trading and Soviet institutions, and also organization in their work together guarantee a successful carrying out of trial mobilization.

(*Karasnaya Zvezda* No. 202 of 6th September, 1927).

Translation from "Sevodniya" (a White Russian paper published in Riga) of 31st August.

MANŒUVRES IN THE U. S. S. R. ("Sevodniya" communication), Moscow, 28th August.

This year's autumn manœuvres will have a particularly grandiose character. Nearly all units of the Red Army will take part in them, as will the Fleet and the Air Force.

The Deputy Chiefs of the General Staff, Pugachev and Pastukhov, declared in interviews with journalists that the aim of the manœuvres was the co-operation of different troops and the Fleet in military operations. It has furthermore been decided to use the manœuvres for military agitation among the civil population. Arrangements have been made for including in certain manœuvre tasks special crews from "Aviokhim" (the League for fostering aviation and chemical warfare), members from the trade unions and the "Komsomol" (Communist League of Youth). Furthermore, special lectures and agitators are to explain to the population during the manœuvres their military aims and their significance in relation to the threatened assault on the U. S. S. R. by the "Imperialists". Special importance is attached by military circles to the manœuvres around Odessa, in which nearly all the troops of the Ukrainian military district and the Black Sea Fleet will participate. The aim of the manœuvres is connected with the possibility of military conflicts with Roumania. In order to prepare the Odessa manœuvres the Chief of Staff of the Red Army "himself," Tukhachevsky, has arrived in Odessa. He has hoisted his flag on the warship "International," on board of which he carried out a one day's cruise together with the whole Black Sea Fleet.

After this cruise there was a meeting of sailors at which Tukhachevsky delivered a long speech concerning the international and military position of the Soviet Republic. The sense of this speech amounted to saying that the present manœuvres might be the last "rehearsal of the military campaign, which might start sooner than was supposed." The Odessa Executive Committee formally decided to give every help to the Red Army at the manœuvres and to begin a special agitation campaign for giving information and explanations as to them. TRIAL MOBILIZATION IN LENINGRAD. (Telegram from "Sevodniya" Reval correspondent.)

According to information received in Reval a trial mobilization was today ordered in the Leningrad military area. The mobilization is a kind of test of the readiness of the Red Army to stand on the defensive for Russia in case of a declaration of war. It is here stated that the Soviet authorities are officially explaining this test mobilization by the present strained position of the U. S. S. R. in the international field.

Red Army.

In accordance with R. V. S. order No. 399 of 5th August, 1927, the following other ranks of the regular army are to be released from the colours in the autumn of this year :—

- (a) Men called up in 1925 who complete 2 years' service, counting from 1st January, 1926.
- (b) Men called up in 1924 who complete 3 years' service, counting from 1st January, 1925.
- (c) Men who complete 4 years' service, counting from 1st January, 1924.
- (d) Men who have passed the examination for the grade of reserve commander in the Red Army, who, having been called up in 1926, will have completed 1 year's service.
- (e) Volunteers and re-engaged men who, having completed their term of service, wish to be discharged.

2. Release of men from units and establishments of the Red Army, except G. P. U. units and "Convoy" Guard troops, to be carried out between 25th September and 1st December, 1927.

3. Release of men from G. P. U. units, including the Frontier Guard, is to be carried out as follows :—

From G. P. U. formations by 15th January, 1928.

,, Frontier Guards by 1st April, 1928.

4. Release of men from "Convoy" Guard troops is to be carried out between 1st December and 1st January.

(*Extracts from the "Krasnaya Zvezda".*)

SHORT HISTORY OF THE OSOVIAKHIM.

The Osoviakhim is a powerful public organization of the masses, created by the Soviet with a view to co-operation with the State in the organization of aero-chemical defence of the country.

There is no corner in the Soviet Union where the organization of the Osoviakhim does not exist. The furthest areas of the republic are in the grip of a network of cells of the public society of the Osoviakhim.

In 1923 the O. D. V. F. (The Society of Friends of the Air Fleet) was created.

In 1924 the Dobrokhim (The Society of Friends of Chemical Industry) was established.

A year after, in May, 1925, these societies were changed to the "Sojus Aviakhim S. S. S. R." (The Society for assisting Aviation and Chemistry).

In 1922 the V. N. O. (Military Scientific Society) was changed into the O. S. O. (Society for Co-operation in Defence).

In January, 1927, a union took place between the "Society for assisting Aviation and Chemistry" and the "Society for Co-operation in Defence" and was then re-named Osoviakhim (The Society for the Organization of Aero-Chemical Defence of the S. S. S. R.) known officially as "Sojus Osoviakhim S. S. S. R."

The Osoviakhim is a voluntary organization of the wide masses of the people.

In January, 1925, the Society O. D. V. F. consisted of 1,898,630 members. On the 1st October, 1925, this figure rose to 2,569,265. During the period 1st October, 1925-26 the Society changed from collective membership to the principle of individual voluntary membership, and carried out a registration of its members on the basis of their willingness to remain in the Society and work for its cause. The result of this campaign was that a part of the collective membership left the Society, and on the 1st October, 1926, the Society numbered only 1,986,324, but on the other hand improved the quality of its members. During the last year October, 1926-27, as a result of the fusion between the Aviakhim an O. S. O., and the campaign of the "Week of Defence," the membership of the Society rose (1st April, 1927) according to unofficial figures to 2,516,340. The growth of the membership is still in course of progress.

The social standing of the members in the Society is the following:—

			per cent.
Workers	..	..	36'4
Peasants	..	..	18'7
Employees	..	..	29'5
Soldiers	..	..	8'6
Others (active)	..	..	6'8

It will therefore be seen that the bulk of the members of the Society is composed of workers and peasants.

Corresponding to the growth of the membership, there has been also an increase in the lower cells of the Society.

	Cells.
On the 1st April, 1925, the O. D. V. F. cells numbered ..	29,868
„ December, 1925, the O. D. V. F. cells numbered ..	33,920
„ October, 1926, the O. D. V. F. cells numbered ..	33,068
„ August, 1927, the O. D. V. F. numbered ..	36,093

the social standing of the different cells is divided as follows :—

			per cent.
Industrial workers	..	..	20
Country workers	..	..	33·9
Officials	..	..	32
Military (soldiers)	..	..	6·2
Scholars	..	..	7·9

The above figures show the growth of the Society during the last 4½ years.

During these years the Society have carried out successful work in agitation and propaganda. At the present moment the Osoviakhim possesses :—

- 33 aero-chemical museums.
- 33 clubs.
- 6,995 corners.
- 1,178 aero-chemical groups.
- 1,942 libraries.
- 1,283 groups of flying recreation (models, plans, &c.).
- 202 chemical laboratories.
- 27 permanent exhibitions.
- 3,063 groups of military education.
- 4,207 groups of infantry.
- 617 groups of medical.
- 836 groups of rifle ranges.

In 1926 there was added an economic section with 7,466 groups for the furtherance of mineral research.

In addition to the above numerated practical organizations throughout the Soviet Union, the Society has several different groups, commands, &c., which have not been taken into account.

Groups of military education.

Medical and fighting groups.

Rifle ranges and many other units and detachments which for the most part were created during the "Week of Defence," can without doubt be classed as a practical result of the summer campaign.

This year in Moscow, the Osoviakhim S. S. S. R. opened a central air museum under the name of "Tovarish M. V. Frunze."

This museum is the central and fundamental archive which the Aviation and Chemical Department possess, not only in our Society,

but throughout the Soviet Union, and also the central home of the aviation-chemical enlightenment of the toiling masses of the country.

In the tens of thousands of lower organizations of the Osoviakhim (cells, groups, &c.) there has been carried out and continues a colossal work in the militarization of the population, the development of the activities of the Society, military propaganda and aviation and chemical knowledge. If to this is added the editorial work of the Society during the last 4½ years, that is the tens of millions of books, pamphlets, circulars, &c., edited and circulated throughout the country, the agitation cars in these years covered thousands of points and carried out numerous agitation campaigns. This gives a clear picture of the gigantic work of the Society in the furtherance of agitation and propaganda.

The campaign of 1923, the first period of the existence of the O. D. V. F., in answer to the Curzon Note presented to the State complete war esquadrides of the Air Fleet. In round numbers, more than 150 aeroplanes and 1,000,000 roubles for the creation of the Red Army, and for the development of peace industries of the country.

The Chamberlain Note of 1927 evoked in answer the campaign of the "Week of Defence," which was carried out with no less, if not with greater enthusiasm than the campaign of 1923. The "Week of Defence" stirred both the town and the village. Interest shown by the peasants was no less than that shown in the town, as a result the "Week of Defence" collected throughout the Soviet Union about 5,000,000 roubles for the fund for defence called "Our Answer to Chamberlain". The might of the Osoviakhim, after the "Week of Defence" considerably increased. The number of members increased to half a million new members. An activity arose among the members of the masses, a considerable interest was noticed on the part of the toiling masses to the question of military organization, preparation of the country for defence, military work, and aviation and chemical knowledge.

SPAIN.

Unrest in Catalonia.

The French police authorities have rendered abortive a fresh attempt by Catalan Separatists to cross the Spanish frontier and raise an insurrection in Catalonia. On 25th October, detachments of French gendarmerie were sent to Foix, Perpignan and other places

on the Franco-Spanish border, in order to prevent any violation of the Spanish frontier ; troops were also held in readiness.

Reinforcements for Morocco.

As soon as barracks are available, six battalions are to be stationed in the following places in Southern Spain, as a reserve for Morocco :—

Jerez, Algeciras, Malaga, Almeria, Alicante.

The 1927 Class.

The first group of the 1927 Class (men born in the first 5 months of 1906 and men set back from previous classes) was called up in November ; the strength is 60,500 compared to 56,200 for the first group of 1926 ; 18,709 recruits are allotted to Morocco, compared to 18,598 for the first group of 1926.

SWEDEN.

Manœuvres, 1927.

Swedish Army Manœuvres took place in the Vannas—Umea area (on the west coast of the Gulf of Bothnia) from 27th September to 1st October last.

2. Umea itself is a small town about 10 miles from the mouth of the River Umea (Ume—Alf) ; this river is here about 200 yards wide, 22 feet deep and has a very swift stream ; above Umea it becomes unnavigable owing to a large cataract. The whole area is heavily wooded and hilly, without being broken ; the valley of the Ume—Alf itself, however, is comparatively open and studded with hamlets.

3. The following troops took part in the operations :—

Blue :

Headquarters.

6th Division—

Headquarters.

11th and 12th Infantry Brigades (each 2 regiments).

8th Norlands Dragoon Regiment.

4th F. A. Regiment.

Detachments, Engineers, R. A. S. C., and Intendantur.

6th (Reconnaissance) Wing, Air Force.

Army troops.

Red :

Headquarters.

7th Division—

Headquarters.

13th Infantry Brigade.

19th Infantry Regiment.

2nd Life Dragoon Regiment (less 2 squadrons).

8th F. A. Regiment.

Detachments, Engineers, R. A. S. C., and Intendantur.

7th (Reconnaissance) Wing, Air Force.

Army troops.

4. The general scheme of the manoeuvres was based on the Russian invasion of Sweden in 1809, under Barclay de Tolly, who crossed the frozen Gulf of Bothnia, and captured Umea. In this case, the main Red Forces (imaginary) were supposed to have landed at Nordmaling and Oruskoldsvik (50 and 100 kms. respectively south of Umea), while a detachment, with whom the operations dealt landed at Umea and was opposed by the (real) Blue Force, with corresponding (imaginary) Blue defending formations to the south. The first situation opened with the Red Force safely ashore and in possession of Umea.

5. The operations commenced with an advance by the Red commander, astride the river, with the object of gaining the Brannland bridge. He failed to gain this objective and, in order to avoid defeat in detail, was compelled to fall back to Umea to reunite his forces. The Blue commander, meanwhile, having failed to pin the enemy to his ground on the south bank, crossed the river by the Brannland bridge and, by the close of operations on the 1st October, a battle was impending north-west of Umea.

SYRIA.

General.

The situation remains generally quiet ; there has been some fighting amongst the Ruwalla tribe, owing to rivalry between clan leaders. Hlai-ed-Din Fattah, one of the leaders of the Syrian revolt, has made his submission to the French and been amnestied.

The Druze Refugees.

The quarrels between the Syrian rebel leaders continue. Sultan Attrash has been refused permission to reside in Transjordan, but has been told that he may do so in Palestine, if he gives guarantees of good behaviour. It is reported that the number of fighting men with Sultan Attrash is dwindling.

CORRESPONDENCE.

POTTED MANUALS.

DEAR SIR,

Field Service Regulations, Vol. 2, states :—The efficiency of the leaders of the smallest units will often be the measure of an Army's success. In discussions on training, this is one of the best known and most frequently quoted phrases.

The word "efficiency", in so far as the duties of the section leader in battle is concerned, is defined for us in the manuals as the correct use of weapons, ground and formations, or in other words as a knowledge of minor tactics and the ability to apply that knowledge under service conditions.

While the standard reached in units in weapon training is nearly always satisfactory, thanks to the generous allotment of time given to it in the training year, it is the exception to meet a unit officer who does not bewail the fact that his section leaders fall far short of his ideal in tactical knowledge and skill. The causes appear to be :—

- (a) Lack of time for holding a sufficient number of minor tactical exercises.
- (b) In the infantry the lack of an infantry school, run on the same lines as the cavalry school, and the lack also of a mountain warfare school. Both these deficiencies can presumably be attributed to our old enemy—Financial Stringency.
- (c) Last, but by no means least, the lack of training manuals which the junior N.-O. O. can read and understand.

The British officer is expected to keep up, read, amend, understand, and digest some fifteen or twenty manuals, not a few of them of considerable bulk. The majority of these books contains knowledge which the junior N.-C. O. requires to know if he is to be classified as efficient.

The standard of literacy attained among the junior ranks of the Indian army is rising fairly rapidly, the thirst for knowledge is usually there, but suitable official books in Roman Urdu, with the notable exception of section leading, are not to be had. When section leading made its appearance after the war it was welcomed with acclamation. The writer knew of one battalion in which the commanding officer was wont to become somewhat heated if he found a British Officer on parade during the collective training season without a copy of it on

his person. Even so, section leading contains no information on such important subjects as:—Use of weapons, Care of Arms, Mountain Warfare, Sangaring, Entrenching, Rapid Wiring, and Sanitation. Information on these subjects must be sought in several manuals, some of them bulky, and which for this reason have not yet been produced in Roman Urdu. Again, section leading is for the infantry. There is no similar book for machine gunners, cavalry, or artillery.

Unofficial books do indeed exist—some of them published commercially, and others produced by units for their own use. The schools of instruction also endeavour to bridge the gap with notes. The former however tend to spread incorrect teaching, and the latter are not generally available.

The solution to the problem is, obviously, what may be called, for want of a better title, a Potted Manual, for each arm of the service, starting with the infantry, whose need is possibly greatest there being no infantry school. The difficulties in the way of their preparation are however considerable. In order to arrive at the form which these potted manuals must take, let us first examine why the present manuals are unsuitable for the junior ranks of the Indian army.

1. They deal mainly with principles. To apply a principle correctly under various conditions requires a brain capable of logical reasoning, an attribute all too rare.

2. Even in infantry training, there is much which is applicable only to the formation, or battalion, or company commander. Thus the section leader in search of learning has to wade through many pages which are of little value to him, and which tend to confuse the issue.

3. The language used is frequently somewhat involved, and the words and sentences are too long. This is often unavoidable in defining and explaining a principle, and presents no difficulty to an educated and careful reader. It does, however, present considerable difficulty to those with less education and power of concentration. In translating such passages into Hindustani it is often necessary to paraphrase, with the result that quite a short sentence in English, may become a paragraph in Hindustani.

4. Amendments to the English manuals appear with distressing frequency, and the number of manuals in possession of officers which from one cause or another fail to get amended is not inconsiderable. If this is true of the English manual and the British officer, how much

more true will it not be of the Roman Urdu manual and the Indian officer and N.-C. O., who has no pot of stick-phast readily available.

To deal with the above points seriatim :-

1. The manuals are written to cover comprehensively the many forms of warfare under the various conditions of climate, terrain, and characteristics of the enemy which the army, including the forces of India and the Dominions, are called upon to face in the outlying parts of the Empire. The Indian Army's primary duty is the defence of the North-West Frontier either against the tribesmen, or against external aggression. The ability of the N.-C. O., to reason logically cannot be said to be highly developed; principles are therefore of little use to the great majority. Can a manual not be produced for each arm, laying down in simple language tactical rules, with especial reference to frontier warfare? The Indian has an admirable memory, and all his inclinations tend towards memorising and following rules laid down for his guidance. The N.-C. O. frequently dislikes to accept responsibility if it can be avoided, and this may lead him to commit the cardinal sin in war of inaction. If he can put the responsibility upon a rule and thereby adopt some definite course of action, even though not the best, the ultimate results is likely to be much better than if he does nothing.

This does not mean that the N.-C. O. would be deprived of initiative. The intention is that the principles governing the various actions of war should be narrowed down to suit the situation with which the junior N.-C. O. is likely to be faced. This can be done so as to put clearly before him two or three alternative courses of action. An excellent example is to be found in section leading, Chapter X, "The Attack," 3rd Phase The Fire Fight".

"When the scouts are checked, the section leader leads his section close up to the scouts, and halts under cover. He then hears from the scout the information concerning the enemy, and studies the ground.

He then has to decide which of two alternatives he will take—either (i) continue to advance, or (ii) stop and open fire. In coming to a decision he must be guided by circumstances remembering that the fact of continuing to advance would generally be the best means of helping a neighbour, and that, as a principle, fire should rarely be opened in attack when satisfactory progress can be made without it."

Possibly the last sentence above might present difficulties to an uneducated reader, especially if translated literally into Hindustani, and might be put more simply as follows :—

“ He must remember that :—

He will generally help other sections more by pressing on than by stopping to fire.

He should not halt to fire if he can get forward without firing.”

The sense of the word, “ rarely ” has been disregarded. It legislates for special cases, and if we are to keep our Potted Manual small, and our teaching simple and clear, we must be prepared to be ruthless in cutting out such special cases. By so doing we lay ourselves open to the student of tactics saying—“ Ah, but this rule has exceptions and is therefore a bad and dangerous rule.” Our reply must be—“ you are correct, but we cannot burden the junior N.-C. O.’s brain with special rules for special cases. It is better to give him a clear rule which will be right in nine cases out of ten.”

The alternative to producing a set of rules is to train and retrain the N.-C. O., under varying conditions of ground, time, space, etc., until correct action becomes instinctive. This is a tedious and lengthy process for which it is hard to find time in an already crowded training year, and which fails to take advantage of his newly acquired literacy.

2. The manuals will require ruthless pruning, even at the expense of cutting out much which might under exceptional circumstances be of use. A General Staff Officer, with imagination and a blue pencil, should be able to do this. At the same time we must put into one book all that the N.-C. O., requires to know both on collective training and on service. The method followed in the Field Service Pocket Book might serve as a guide.

3. The language used must be the simplest, short words, and short sentences, with a very sparing use of the passive voice. It must also be so expressed and arranged as to admit of easy translation into clear and simple Hindustani. The more that the writer can lay down rules, as opposed to principles, the more simple does the choice of words and style become.

4. The book will speedily become out of date, but being a small book it should not prove financially impossible to reprint it say, every two years, and thus avoid the issue of any amendments.

It is, in the writer’s opinion, not an exaggeration to state that such a book, for each arm of the Service, would at once prove its

popularity. There is no doubt that many Indian N.-C. O's would gladly buy such a book, provided it was issued under the authority of Army Headquarters, and the price was not more than Re. 1/-.

Yours faithfully,
D. B. MACKENZIE, CAPT.

TO MEMBERS PROCEEDING HOME.

From a letter recently received from the House Governor, it would appear that the Officer's Convalescent Home, Osborne House, Cowes Isle of Wight, is not well known to Officers of the Indian Army.

Accommodation exists for some 60 officers and the inclusive charge is 6/- a day for officers on the active list, or 4/6 if on half-pay.

Osborne House was one of the favourite residences of the late Queen Victoria and was presented to the Nation as a Convalescent Home for officers by the late King Edward VII.

It is situated in charming grounds of 400 acres, which contain a first-class nine hole golf-course, tennis courts, etc., and facilities exist for practically all out-door and in-door recreation. There is limited accommodation for wives in a hostel attached to the Home. Massage and Electrical treatment are provided. Accommodation is almost always available and officers of the Indian Army wishing to go to Osborne Home should apply to the Military Secretary, India Office for admission. There are no formalities such as Medical Boards and any officer wanting a change may be admitted if accommodation is available.

Editor.

REVIEWS.
THE GREAT PYRAMID AND ITS PURPOSE.

By

D. DAVIDSON AND H. ALDERSMITH.

(*Williams and Norgate Ltd., London 1926*) 25s.

The Great Pyramid and its Purpose.

Very considerable interest is being taken in England at the present time in what is alleged to be the Divine prophecy concerning the future of the British race embodied in the Pyramid passages. The particular point on which attention centres at the moment is the definite prediction that Armageddon or circumstances involving an eight years' world war of greater intensity than the last, is to commence at midnight 29/30th May 1928.

The Argument.

It is argued that the Pyramid is a "Bible in Stone" and that the dates and details agree exactly not only with Bible prophecy, but also with the sacred books of the Egyptians, written at a time when the more than human science of the Adamic race was still preserved by the Egyptian priesthood. The inferences are said to be confirmed by the extraordinarily accurate astronomical facts emphasised in the whole structure, facts only capable of verification in the present century.

Its Present Interest.

The reason why the subject has attracted so much notice in the last ten years is the flood of light which has been shed by archæologists "in the latter days" in analysing the sacred writings in hieroglyph and cuneiform.

The above claims appeared to the writer to justify investigations, and the result of certain necessarily imperfect enquiries into facts ascertainable are set forth below.

History.

Ever since the Caliph Al Mamoon quarried a way into the Pyramid passages early in the 9th century, there have been many who thought that their unexplainable formations symbolized some hidden prophetic purpose. Napoleon had measurements taken, and various other investigations were carried out. But the first scientific attempt made was by Professor Piazzzi Smith, Astronomer Royal of Scotland, in 1865, followed by many others, including Civil Engineer. The first really connected argument identifying the Grand Gallery (see plates) with the Anglo-Saxon Christian Dispensation was published

by Col. Garnier, R. E., in 1905. The present position of the science is due mainly to the monumental labours of Mr. D. Davidson, M. C., M. I., Struc. E., who has given up his lucrative prospects in the engineering world so as to study Pyramid records. His enquiries have demanded a knowledge of architecture, astronomy, and mathematics and archæology not ordinarily attainable by any one man, and Davidson has been so convinced of the worthiness of his cause that complete elucidation of the riddles and symbolisms of his "Bible in Stone" has become the one purpose of his life.

The case against.

On the other hand, there are aspects of the subject which rather discredit the many convincing features put forward. The Egyptologists, as a whole, are sceptical and base their objections on several presumptions, each of which is refuted by Davidson. They find that the dimensions of the Pyramid base on which many measurements are based, are upset by the recent (1925) Egyptian Government Survey. This Davidson meets by reckoning the difference as a phase of his "displacement" theory, to be discussed later. Egyptologists, headed by Sir Flinders Petrie, who surveyed the Pyramids officially and has written much on the subject, maintain that the Pyramid was a tomb, which Davidson denies with very convincing arguments.

They also point out that the Egyptian King Lists, which Davidson says were forged by the Egyptians themselves in Pholemy's times, do not fit in with the Pyramid dating.

The fact remains that so far as can be traced, few well-known men of science have lent their names and reputations to support the theories, and it is also true that certain sections of rather advanced British Israelite propaganda have adopted the cause as their own. Most of the literature on the subject has a religious savour, and is interlard with texts and assertions postulating the blind acceptance of Holy Writ as part of the argument. Most intelligent research in this century prefers to base its enquiry on logical proofs rather than neurotic postulates.

The above are serious points of disagreement and should be borne in mind in perusing the "case for the defence."

Study of the Subject.

After reading pamphlets on the subject by the Revd. C. C. Dobson and Basil Stewart, which referred points of doubt to "The Great Pyramid, its Divine Message," by Davidson and Aldersmith, the

writer studied this last, and was amazed by the immense mass of unsystematised information thrown at the reader's head. While able to follow more or less the various proofs advanced, the present writer felt that the failure to make a clear cut case by such an obviously able exponent could only mean that the exponent was not himself convinced. This impression was somewhat altered by the series of articles in the *Morning Post*, 17-22 October 1927, which gave a much more connected argument, if not an entirely convincing one.

Superhuman Agencies.

It is now accepted by the world of science that certain manifestations of thought transference and occult suggestion definitely exist in our Kosmos, impressions which if not "revelations" have been so often and so categorically recorded that even the plain man must now admit that psychic factors have to be reckoned with.

The Pyramid enthusiasts go further, and say that many of these factors are the manifestations of a Divine will, and that the stored up and inspired knowledge of the "chosen" Adamic race is perpetuated in a "Pillar of Stone", and that the impulse to build this monument was a kind of super-inspiration of greater and more considered purpose than the comparatively minor promptings as recorded in psychic research and in historical episodes.

Proofs Advanced.

In his "Great Pyramid" (William & Norgate, 1926, 25 shillings net) Davidson lays himself out to prove that :—

1. The Pyramid is a geometrical representation of the mathematical basis of the science of a former advanced civilization.
2. That in the Pyramid this knowledge was condensed into a formula analogous to Einstein's theory, and that this knowledge pervaded all branches of that earliest civilization.
3. That the independent Egyptian civil records, *e.g.*, Manetho's "Book of the Dead" and premessianic records define the geometrical dimensions of the Pyramid, the units of measure, and the allegorical symbolism and purpose of the Pyramid's construction. He maintains that the agreement of these various authorities and their harmony with biblical prophecy is confirmed by Sir Flinders Petrie's works and his official survey.
4. He considers the passage systems to be an elaborate graphic representation of prophetic chronology, "intimately related" to biblical prophecy, and giving so many definite dates of important

events in Messianic history as to disarm any suspicion of systematic fabrication.

5. He brings out that the final time of tribulation for which the Pyramid record was predestined, is now upon us.

6. He argues with some plausibility that the whole record has been enshrined, so to speak, in amber, against the time when the British race, the makrocephalic Adamic type should fulfil its destiny. This race was to preserve its identity through the changing evolutions of many centuries to become, after a life and death struggle against Russian hordes, the final survival of the chosen people, a people not necessarily Jewish or even the seed of Abraham, but the Adamic stock which for so many centuries preserved the knowledge of the Egyptian priesthood.

His main contention in favour of this view is the British inch, the only scientific measure of any antiquity now surviving. In confirmation he adduces many contributory facts from prophecy and Egyptian sacred records which have considerable bearing on the subject. It is his misfortune that many of these, sometimes circumstantial and at others rather specious arguments, have been used *ad nauseam* by the British Israelites, to which cause he is to some extent sympathetic but quite independently of his Pyramid reasoning.

Scope of Davidson's Work.

Davidson divides his work of 700 pages (11"x 7" with 70 plates and 67 tables) into five chapters, of which each is in three parts, the first (so called) argument and narrative; the second and third parts, to be read at the second reading, accessory and explanatory.

Chapter I covers ancient metrology, founded on the functions of the Earth and its orbit, with the Solar year as the time unit and the British inch, a 500 millionth part of the Earth's Polar diameter as the linear unit. The last was the basis of Egyptian metrological texts and of the Hebrew cubit. The Pyramid is represented as a sort of super-calendar and index of sowing dates to the ancient Egyptian world and to be the superhuman design for other Sun Calendars such as Stonehenge, perpetuated in other climes by the wanderers of the original Adamic race.

Chapter II shows that the Pyramid's exterior was based on gravitational astronomy. The author introduces his "Displacement" theory, that universal defect in human as opposed to Divine effort, which is emphasised in all Messianic (and Islamic) legend, but is here

portrayed in many unmistakable forms as a lasting record in stone. This "Displacement" figure, (286, 1022, p. 2) is said to supply nine different astronomical values with the accuracy of modern astronomy and to account for the difference from the theoretical dimensions of the Pyramid's base as compared with the dimensions actually found in the recent Government Survey.

Chapter III refers to the internal passage system as a graphical exposition of gravitational astronomy confirming the external proofs. The application of the zero date for prophecy is brought out in its relation to modern astronomic facts.

Chapter IV shows how the Pyramid records synchronise with the secular writings of Egypt, Babylon and Israel. The idea in the author's mind is that a highly cultured race "in the image of God" was cradled more than 6,000 years ago "somewhere in Central Asia", and driven by economic facts out of Eden into the then populated centres of a lower culture. Thence they dominated the races they met, either as priests or kings, and retained much of the semi-divine knowledge of their early existence. Their wanderers left relics of their culture in the widest latitudes—Britain, Africa, and even America, but the race gradually became extinct and with it the knowledge and civilisation which was admitted as extant in Moses' time among the Priesthood.

The author brings many cross facts to confirm his reasoning, and has since brought out a further volume ("A connected history of early Egypt, Babylonia and Central Asia") on this aspect of the problem.

In this respect his views are curiously strengthened by Sir Aurel Stein's explorations in "Tekla Makan" the ancient Kashmir valley of Central Asia, and by Waddell's enquiries into early Sumer Aryan language and civilisation in Syria.

The fifth chapter identifies the first eleven chapters of Genesis, and the records of the early Egyptians, as one and the same story, and classifies the various names such as Seth and Enoch as dynasties having their exact counterpart in early Egyptian King Lists. Then follows a very careful comparison of dates both past and future by the different interpretations, secular, allegorical and astronomical, painting in the circumstantial conditions of the various epochs.

Such is the scope of Davidson's rather imposing work, but with it all one feels that an author with the serious grasp of his subject

shown, ought to be able to put forward a more convincing story. Even a table of contents would be valuable, but at present the reader flounders through an impossible maze of facts, and cannot see the wood for the trees. This is as stated less noticeable in the *Morning Post* edition in October 1927.

Points in Favour.

Now to discuss some of the main features said to support a super-human origin of the Pyramid.

(a) The site was ten miles from the quarry, and according to Herodotus, this involved 100,000 workmen, relieved quarterly, for ten years' work bringing the five million tons of limestone, and the granite blocks from Syene, 500 miles up the Nile. Many of the latter weighed over 60 tons, and had to be raised hundreds of feet to be placed in position to support the roof of the King's Chamber.

(b) The structure of the Pyramid is clearly proved to give in its dimensions, trigonometrical and integral functions the following facts :—

(i) The solar, sidereal and anomalistic (date between equinoxes) years, to decimals of a minute.

(ii) The mean sun distance 92,996,825 miles as against the latest astronomical figure 92,998,000.

(iii) The value of " II " to six places of decimals.

(iv) The formula for the annual rate of the precession of the equinoxes for the Pyramid datings 4699 B. C. (Zodiac Zero) to 2045 A. D.

(v) The English inch, originated in Anglo-Saxon civilisation, and the Hebrew cubit.

(c) The orientation with exact reference to Alpha Draconis, the Pole Star in 2144 B. C., the date of construction, as confirmed by other features.

(d) The absence of hieroglyphics or inscriptions as found in every other ancient monument of the sort in both the Old and New worlds and the strange and unaccountable construction of the passages.

The interpretation put on these passages by Pyramid scholars is too plausible to be lightly dismissed.

ABP is said to represent the natural moral destiny of man—to the bottomless pit at P. BE is represented as the narrow progress of the Jews from the date of the Exodus (at B) to the death of Christ at E, when a larger and broader period of progress commences. The zero

date of calculations is the junction of the line M.O.E.B. with the extension of the side of the Pyramid into the ground. This date, at an inch to a year, is 4000 B. C. The huge blocks of pink granite in which these measurements are preserved, are so carefully cut, with the precision of watch-making, that it is difficult even to see the joints.

On the same inch to a year measurements, the great step at N is dated 1844, the beginning of the "time of the end". Thenceforward the inch represents to a month, dating on the month scale from August 1909.

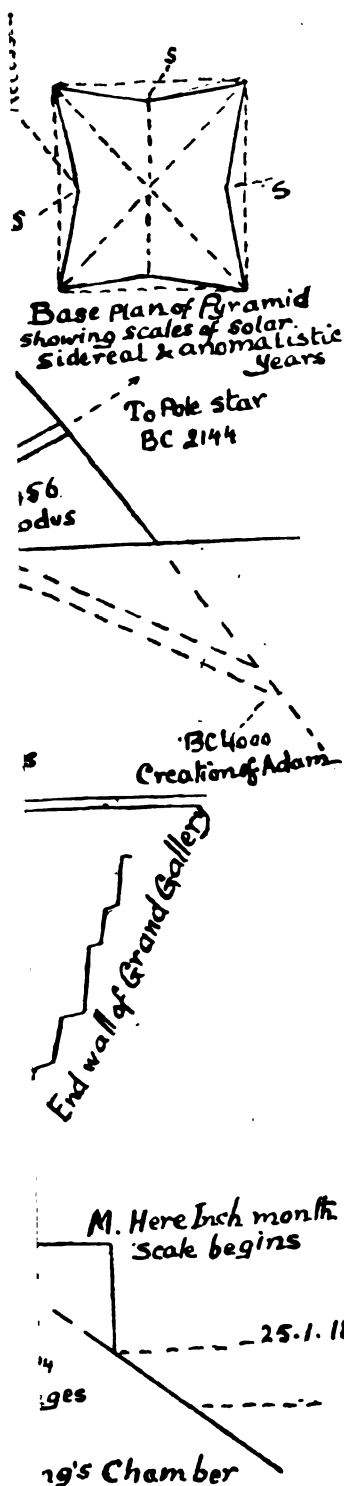
The pros and cons.

These are a few dates. There are others, such as would be selected by a historian when picking out salient points in Messianic history. It is of course only possible to prove those after the event, but it is at the same time difficult for even the sceptic, if fair-minded, to bear out the thesis that all the dates so found have been worked up to fit in with the known facts; and even if the most plausible intersections of ordinates, perpendiculars and normals have been cooked, the coincidences are too numerous and too striking.

There are certain indications that the Pyramid's allegory, if it has any signification at all, refers to the period 1844 A. D. to 2045 A. D. and it is urged by the enthusiasts that the important part of this period, from August 1909 to August 1953 would naturally have an enlarged scale, in the same way as a map of England would give an enlarged plan of London. This point of view is nothing if not specious, and is sufficiently plausible to justify provisional acceptance as a basis of argument.

The various passages, which are very exactly described under the allegorical names in the Egyptian sacred books, are all interconnected. This specially applies to F. Q., symbolising Jewish progress after B. C. 4, the date of the birth of Christ. It was this date of the birth of Christ, confused in Egyptian writings with the passion of Osiris, which led astray investigators like Piazzzi Smith in the Sixties. The error of four years in this basic date (as known in those days) deprived the Astronomer Royal of Scotland of all the convincing date intersections which have lent such interest to the investigations of to-day. It is noticeable that perpendiculars upwards from definite constructional points in this (Jewish) passage, coincide with other definite points on the "Christian" records, e.g., the date of Allenby's entry into Jerusalem on 11th December 1917. In this connection it

A.



A. Entrance (symbolising beginning of Story).

B. Granite plug blocking ascending passages (till the prescribed date of disclosure).

C. Ascending passage. (Hall of Truth in Darkness).

E. Commencement of Grand Gallery, and Birth of Christ.

F. Well passage (Post building examination).

G. Grand Gallery (Christianity). "Hall of Truth in Light".

H. Horizontal passage to Queen's chamber. (Path of Jewry).

K. King's chamber (the goal of the Story).

M. Great step. Change of dating.

N. Anti-chamber with granite. "The truce in chaos".

P. The pit. Mortality of unguided.

Q. The Queen's chamber. The goal of Jewry.

R. The Coffin. "The open tomb".

S. Constructional hollows "giving lengths of the various years".

W. Well. (Post building examination).

is significant that Dr. Grattan Guinness, writing in 1878, and working on biblical prophecy, predicted this year 1917 as an important year for the Jews and the end of the Ottoman Empire.

It is also either convincing or represents a very remarkable ingenuity in interpretation, that the various morals and co-ordinates to the various surfaces in the passages, whether ceiling or floor, do indicate various dates on the inch scale, in nearly every instance of definite import in the Christian Era. In other cases integration of the various functions produces coincidences of datings and confirmations of other dating which are often too surprising to be accidental, even to the sceptic, and even with the full knowledge that the integral calculus is a development yesterday.

The problem as a whole.

It is of course quite impossible in a short review of this sort to do more than touch the fringes of a very big subject on which a great deal has been written. There is no doubt, however, that to the man with an enquiring and a mathematical mind there is much food for thought. Enquiry cannot fail to convince the student of a very advanced pre-historic civilisation, but whether the facts indicate prophetic symbolisms and divine revelations is a matter which each must judge for himself. It is very difficult to account for all the scientific disclosures and dates of coincidence on purely human agency, and the attempt seems worthy of some of our foremost scholars.

Bibliography.

The following works in connection with the subject may repay study:—

Sir Flinders Petrie.

Pyramids and temples of Gizeh.

Royal Tombs of the first Dynasty.

* Historical studies.

History of Egypt.

Ancient Egypt.

Basil Stewart.

The witness of the Great Pyramid.

Edgar.

* Great Pyramid Passages.

Marshall Adams.

Book of the Dead.

Those marked * are of special importance.

NAPOLEON.

By

EMIL LUDWIG.

(Messrs. G. P. Putman's Sons, London, 1927) 21s.

This is a life of Napoleon written from rather an unusual aspect. It gives his inner life and thoughts in considerable detail, only touching briefly on his great military campaigns and victories. The book, however, is of great interest to the student of military history, in that it gives a vivid picture of the habits, thoughts and methods of work of the great soldier.

The description of his last years at St. Helena are particularly interesting—a pathetic end for the conqueror of half Europe, cooped up on the rocky unhealthy island and surrounded by the rather unnecessarily severe restrictions and bounds imposed by the governor.

The book leaves one with an increased impression of his wonderful capacity for work—his endurance to every form of fatigue and hardship combined with curious weaknesses for so great a character.

He was inclined to be theatrical and over introspective and he allowed his position as the greatest ruler in Europe to go to his head and warp his military judgment. His Moscow Campaign was an example. One could never have imagined him, earlier in his career, undertaking such a campaign in a barren country with such inadequate supply arrangements, nor, once having arrived at Moscow, with the supply arrangements even more uncertain and winter approaching, can one understand his long delay there doing nothing, which had such disastrous consequences.

He promoted by merit alone with the exception of his own relatives to whom he gave thrones and riches in profusion even though he knew them to be incompetent and worthless.

Things might have gone very differently with him had he chosen his underlings with greater discrimination.

The book is of the deepest interest to all students of the Napoleonic period both from a military and a political standpoint.

FIELD-MARSHAL SIR HENRY WILSON, BART., G.C.B., D.S.O.,
HIS LIFE AND DIARIES, VOLS. I AND II.

By

MAJOR-GENL. SIR C. E. CALLWELL, K.C.B.

(Messrs. Cassell & Co., Ltd., London, 1927) £2.2s.

A great deal has been written about this book during the short time which has elapsed since its publication and the opinion of most

reviewers has been that it is a very great pity that the book has been published at all as its effect is to diminish the reputation of one of the leading British soldiers of the Great War.

The book is published in two volumes and consists largely of extracts from the Field-Marshal's private diary which he kept up ever since his time as a student at the Staff College.

It contains much that he would certainly have cut out had he been editing the book himself, and it is these portions of somewhat fulsome self-praise and belittlement of others in high places, both military and political, which make the book in some ways an unfortunate one. Much of it is, however, of extraordinary interest to the military student; particularly that portion which deals with Sir Henry Wilson's invaluable work at the War Office as Director of Military Operations before the Great War. The Nation can never be sufficiently grateful to him for his wonderful work in perfecting the mobilisation arrangements of the British Expeditionary Force and in establishing a working arrangement with the French General Staff, without which our effective co-operation in the opening stages of the war on the western front could never have been accomplished. The foresight, drive and persistence which he then displayed as a comparatively junior officer were truly remarkable.

During the war itself he came to the front rather as a political than a fighting soldier and his year in command of a corps was not a very successful one.

The latter part of the book describing the last years of his life when, as C. I. G. S., he was mainly concerned with the Irish question, which had naturally always been of such intense interest to him.

At the time of his death it appeared that a distinguished political career might be before him as a member of the House of Commons.

He was undoubtedly one of the outstanding personalities of the Great War and the interesting story of his life will be very widely read.

JOURNAL OF THE ROYAL ARTILLERY.

January 1928.

Included in this volume is a very convincing argument on the merits of H. E., in comparison with shrapnel, by Captain Benfield, R. A. The writer sets out to prove that although at the beginning of the war, when massed infantry attacks were the order of the day, shrapnel may have been the more destructive. Under present day

conditions, when the nature of the target has changed to the widely dispersed pin-points of machine guns, light guns and mortars, all under some sort of cover, suitable targets for shrapnel have become the exception.

The truth of Captain Benfield's assertion is difficult to disprove—especially when the more vital targets may consist, in the future, of swiftly moving armoured machines.

Another good article is that by Colonel Howard on "The Impatience of an Infantryman", Colonel Howard believes that, in normal warfare, there is now no place for the unarmoured soldier and that our infantry divisions will merely play the rôle of rather helpless spectators while the armoured forces fight out the issue—perhaps two or three hundred miles away. This is a very controversial subject. Colonel Howard's article, which ends with the words, "If the reasoning and conclusions in this article are wrong it would be of interest to be told where they fail", is so concisely and convincingly put that it is difficult to say where his conclusions are wrong or his reasoning unsound.

The last article in this volume "A Beginner After Big Game" by Lieut. Hendley, shows that the fascinating sport of big game shooting is still available at moderate expense in India if one takes the trouble to make a *bandobast*, has plenty of energy, and a little luck.

COMMERCIAL AIR TRANSPORT.

BY

LIEUT.-COLONEL I. V. O. EDWARDS, C. M. G.

AND

F. TYMMS, M.C., A.F.R. Ac. S.

(*Sir Isaac Pitman & Sons, Ltd., London 1926*) 7s. 6d.

The wrapper of this book, being like all wrappers, an optimist, states that the book is "Invaluable to the business man and as a text book for the examinations of the Institute of Transport". In our opinion the achievement of these two objectives in one volume is incompatible, and while acknowledging the value of the work that the joint authors have produced, we cannot help feeling that they have at times forgotten just what the purpose of the book really is. In places it is fairly technical—for example the chapter on Air Navigation, not technical enough though, we feel, for the student and too technical

for the business man, who doesn't want to know how the pilot gets the machine from A. to B., but merely that he does arrive safely at B.

However, in the main, the authors have produced much matter that is both useful and instructive and which should prove of value to India at the present time where there is much talk of inaugurating Air Services.

The book opens with a chapter on the early history of flight : it is suggested that this might have been confined to a history of air transport since the war, this being the object of the book, and then goes on to discuss the question of subsidy. This chapter is interesting, in that it shows the various evolutions through which the Government subsidy to Imperial Airways has past. The writers, we are glad to see are opposed to the principle of the subsidy, but agree that it is essential until air transport has found its feet. With these sentiments we heartily agree.

The next problem to be tackled is that of State *versus* private operation : this is a vexed question which concerns other forms of transport than aircraft and if the economic facts are faced, which they very often are not, there can be no doubt that private operation holds out every advantage, an opinion which the writers appear to share. Information is given in regard to the legislation in force connected with International flying and as the authors state, although much progress has been made, until all States have signed the International Air Convention, the position cannot be really satisfactory. A short, but useful, chapter on the General Principles of Air Transport is followed by one in which the Basic Principles are discussed.

The point is made that until night air services become a recognized part of the organization of Air Transport, difficulties will always be found in competing with existing ground services and true economy of operation will not be achieved.

Valuable information in regard to the economic factors is given, the point being stressed that improvement in the performance of aircraft must be regarded as one of the chief factors in reducing running costs. Ground organization, Wireless and Meteorological services and traffic control are briefly sketched, followed by a semi-technical note on Air Navigation, which, as we have already stated, seems superfluous, or perhaps should have been written in another way ; as it stands it does not achieve either of its objects.

The chapter on Night Flying is excellent and much information in regard to the organization and operation of night air services is included.

The three chapters which follow go into considerable detail of existing airways, the carriage of passengers, freight and mail and the issue of licenses. Many useful tables and statistics are given, which should be very helpful to new companies in framing their estimates and making their plans generally.

In discussing the types of aircraft and engines best suited to the requirements of air transport the authors conclude that the days of the wooden machine are numbered and that all metal aircraft will be the ultimate development. The merits and demerits of flying boats and seaplanes are discussed and the point made that, a sea route is very much cheaper to prepare and maintain than a land route, although the increased initial cost of sea-going craft is far higher than that of aeroplanes.

The financial conclusion which the authors reach is that "the development of aircraft for purposes of air transport in the near future lies in large monoplanes of all metal construction, fitted with three or more radial air-cooled engines". We think this is a conclusion with which many people will agree.

The book ends up with Notes on Technical Development, the use of aircraft for air survey and other work not included in air transport, and ends on an optimistic note as regards the future.

The writers believe that commercial air transport will come into its own before very long: that it is still in a state of comparative infancy: that the airship will play a big part in future development and that the airship and the aeroplane will be complementary to one another.

These conclusions are perfectly sound as indeed is most of the matter in this small volume, which can be recommended to all who take an interest in this subject, so full of vast possibilities and likely to be so vital to the future of the British Empire.

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The *Journal* of the
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 of INDIA

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2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed inside front cover.
3. The Reading Room of the Institution is provided with all the leading illustrated papers, newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan free. Books are sent out to members V.-P. for the postage.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in any part of the world.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found in para. IV, Secretary's Notes.
- 7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.**
8. When temporarily in the U. K., Officers of the Indian Army can join the Royal United Service Institution, Whitehall, for a period of six months on payment of half a guinea, or for a period of one year on payment of a guinea.

United Service Institution of India.

JULY, 1928.

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I.—New Members.

The following new members joined the Institution from 1st March 1927 to 31st May 1928 :—

ORDINARY MEMBERS.

Captain J. H. Rigg.	Captain R. S. King.
Lieut. R. G. Thurnburn.	Captain J. M. Morin.
Lieut. G. Meynell.	Lieut. E. G. Dawes.
Lieut. S. J. White.	Captain C. E. C. Gregory.
Captain Hon'ble R. T. R. P. Butler.	Lieut. C. C. M. Macleod-Carey.
Captain J. W. Williams.	Lieut. H. C. B. Hall.
Captain A. L. Elsworthy.	Captain W. E. Jackson.
Captain H. L. Mostyn-Owen.	Captain F. D. S. Fripp.
Lieut.-Colonel V. Coates.	

II.—Examinations.

(a) The following table shows the campaigns on which the military history papers will be set from March, 1928, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii) :—

Serial No.	2	3	4	5
	Date of examination.	Campaign set for the first time	Campaign set for the second time.	Campaign set of the last time
1	March, 1928 ..	Waterloo, 1815 (from the landing of Napoleon in France, 1st March, to the conclusion of operations at Waterloo).	..	Mesopotamia, 1916-17 (as detailed in Army Order 339 of 1925 as amended by Army Order 168 of 1925).
2	October, 1928 ..	Palestine, 1917-18 (from Genl. Allenby's assumption of command, 28th June, 1917, to the conclusion of operations, 31st October, 1918), covered by despatches, dated 18th December, 1917, 18th September and 31st October, 1918, and 28th June, 1919.	Waterloo, 1815 (as given in Serial 1, column 3)	..
3	March, 1929 ..	..	Palestine, 1917-18 (as given in serial 2, column 3).	Waterloo, 1915 (as given in serial 1, column 3).
4	October, 1929 ..	Egypt and Palestine, from the outbreak of war with Germany to June 1917.	..	Palestine, 1917-18 (as given in serial 2, column 3).

NOTE.—With regard to Army Order 363 of 1926, the above campaigns will not be divided into general and special periods.

(b) Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2.—*The Palestine Campaign.*

• A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. C. G. Powels).

B.—OTHER BOOKS.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The Revolt in the Desert (T. E. Lawrence).

Allenby's Final Triumph (W. T. Massey).

How Jerusalem was Won (W. T. Massey).

Outline of the Egyptian and Palestine Campaigns, 1914-18
(Bowman-Manifold).

L'Attaque du Canal de Suez (Douin).

Army Quarterly—October 1920 (T. F. Lawrence's article).

Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T. Atkinson's articles).

Cavalry Journal—October 1921 Lieut.-Colonel Rex Osborne's article).

Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).

R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's article).

U. S. I. Journal—October 1923 (Captain Channer's article).

3.—The Dardanelles Campaign.*Description.*

- | | |
|--|--|
| Naval and Military Despatches .. | A clear account of the operations in detail from the G. H. Q. standpoint. |
| Reports of the Dardanelles Commission. | Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts. |
| The Dardanelles (Callwell) .. | The best account and criticism of the strategic conduct of the campaign. |
| Gallipoli Diary (Sir I. Hamilton) .. | The campaign from the point of view of the C.-in-C. on the spot. |
| Life of Lord Kitchener (Arthur) .. | Throws considerable light on Lord Kitchener's direction of the campaign. |
| The Dardanelles Campaign (Nevinson). | Well written and picturesque accounts by eye-witnesses. |
| Gallipoli (Masefield) | |
| The World Crisis (Winston Churchill.) | |
| | Explains his part in inception of the campaign. |

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

- Soldiers and Statesmen (Field Marshal Sir W. Robertson). point of view of the
C. I. G. S.
Five years in Turkey (Liman Van Sanders).
Official Account: Official History of the War, Naval Operations, Vols. II and III.
Gallipoli Campaign (Outline of Military Operations). By a Student.
Experiences of a Dugout (Callwell).
Despatches from the Dardanelles (Ian Hamilton).
The Navy in the Dardanelles Campaign (Wemyss).

4.—The Mesopotamia Campaign.

- The Campaign in Mesopotamia, 1914-18 (Evans).
Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).
Critical Study of the Campaign in Mesopotamia up to April, 1917.
Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
The World Crisis (Winston Churchill).
Notes and Lectures on the Campaign in Mesopotamia (A. Kearsey).

5.—Waterloo Campaign.

- Waterloo Campaign (J. H. Anderson).
Waterloo (Hilaire Belloc).
Wellington and Waterloo (Arthur Griffiths).
Waterloo the Downfall of the first Napoleon (George Hooper).
Campaign of 1815 (W. H. James).
With Napoleon at Waterloo (E. B. Low).
Campaign of 1815, Ligny: Quatre Bras: Waterloo (W. O'Connor Morris).
Waterloo Campaign (S. C. Pratt).
Wellington and Waterloo (G. W. Redway).
Wellington Campaigns. Peninsula-Waterloo, 1803-1815, also Moore's.
Campaign of Corunna (C. W. Robinson).

6.—*The American Civil War.*

Stonewall Jackson and the American Civil War (G. F. R. Henderson).

History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).

History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).

American Civil War (J. H. Anderson).

The 1st American Civil War, 1775-78 (Henry Belcher).

The American Civil War, 1861-64 (John Formby).

History of the American Civil War (J. W. Draper).

Fredericksburg and Chancellorsville (J. E. Gough).

Battles and Leaders of the Civil War (Johnson and Buel).

War of Secession, 1861-62 (G. W. Redway).

7.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

8.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

A Staff Officer's Scrapbook (Ian Hamilton).

German Official Account.

Lectures on the Strategy of the Russo-Japanese War (Bird).

Question on the Russo-Japanese War (Brunker).

Official Account: The Russo-Japanese War (Naval and Military),
3 Vols., published by Committee of Imperial Defence.

Outline of the Russo-Japanese War (Ross).

A Study of the Russo-Japanese War (Chasseur).

My Experiences at Nan Shan and Port Arthur (Tretyakow).

Outline History of the Russo-Japanese War, 1904, up to the
Battle of Liao-Yang, with Questions and Answers (P. W.).

A Short Account of the Russo-Japanese War ("Footslogger").

An account of the Battle of Liao-Yang (with questions and 10
maps for examination purposes) (Bird).

9.—*The Palestine Campaign.*

The Official History of the Great War—Military Operations in
Egypt and Palestine, Vol. I, and Maps (Lt.-General Sir
George MacMunn and Captain Cyril Falls).

The Palestine Campaign (Colonel A. P. Wavell).

An Outline of the Egyptian and Palestine Campaigns, 1914-18
(Major-General Sir M. G. E. Bowman-Manifold).

Official History of Australia in the War, 1914-18, Vol. VII, Sinai
and Palestine (H. S. Gullett).

The Desert Campaign (W. T. Massey).

10.—*Organization of Army since 1863.*

A.—ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue, Vols. I to XI.

Outline of the Development of British Army, by Major-Genl. Sir W. H. Anderson.

Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

* Notes on the land forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1925.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines, viz., R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc.

11.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas, 1917).

The British Empire Series. (XII Volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

* Particularly recommended by the C. I. G. S. for all officers to read.

- Forty-one Years in India (Lord Roberts).
 History of the British Army (Sir John Fortescue).
 General Survey of the History of India. (Sir Verney Lovett).
 Citizenship in India (Capt. P. S. Cannon).
 India in 1926-27. (J. Coatman).
 India (Nations of to-day Series). (Sir Verney Lovett).
- B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.**
 The Rise and Expansion of British Dominions in India (Sir A. C. Lyall, 1894).
 A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).
 The Nearer East (Hogarth, 1902).
 Modern Egypt (Cromer, 1908).
 Egypt and the Army (Elgood, 1924).
 The History of Canada (W. L. Grant).
 Nova Scotia (B. Wilson, 1911).
 Report on British North America (Sir C. P. Lucas).
 The Union of South Africa (R. H. Brand, 1909).
 Short History of Australia (E. Scot).
 History of the Australasian Colonies (Jenks, 1912).
 The English in the West Indies (J. A. Froude, 1888).
 The Lost Possessions of England (W. F. Lord, 1896).
 International Relations of the Chinese Empire (H. B. Mosse).
 (Kelly and Walsh, Shanghai).
 What's Wrong with China (Gilbert).
 Why China Sees Red (Putman-Weale).
 Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).
 12.—*Military Geography*.
 Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).
 Imperial Military Geography (Capt. D. H. Cole, 1928).
 Introduction of Military Geography (Col. E. S. May).
 Imperial Defence (Col. E. S. May).
 Main Feature of the Japanese and other Pacific Problems.
 (Reprinted from *Morning Post*. Sifton Præd).
 Britain and the British Seas (H. J. Makinder, 1907).
 Military Geography (Macguire).
 Imperial Strategy (Repington).
 War and the Empire (H. Foster).
 Historical Geography of British Colonies (Dominions), 7 Vols.
 (Sir C. P. Lucas, 1906-17)—
 Vol. 1, Mediterranean.
 Vol. 2, West Indies.
 Vol. 3, West Africa.
 Vol. 4, South Africa.
 Vol. 5, Canada.
 Vol. 6, Australia.
 Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

13.—*Foreign Armies.*

OFFICIAL.

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- * Handbook of the Polish Army, 1927.
- * Handbook of the Army of the Kingdom of Serbs-Croats and Slovenes (Yugo-Slavia) 1927.
- * Handbook of the Czechoslovak Army 1927.
- * Handbook of the Swiss Army 1924.

14.—*Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh, 1926).

III.—*Payment for Articles in the Journals.*

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 500 is awarded for articles and reviews published in each Quarterly Journal.

IV.—*Contributions to the Journal.*

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 509, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet* black. No washes or ribbands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be Taken Away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is now available. Price As. 8 plus postage As. 4.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. The Annual Report of the Smithsonian Institution, 1926. (Presented by the Institution, Washington.)	1927.	..
2. Military Report on British Somaliland, Vol. II—Routes. (Presented by the War Office.)	.. 1926.	Official.
3. The Future of the British Army (Presented by Messrs. H. F. & G. Witherby, London.)	.. 1928.	Bt. Major B. C. Denning.
4. Soldiering in India, 1764—1787 (Presented by Messrs. William Blackwood & Sons, Ltd., London.)	.. 1928.	W. C. MacPherson.
5. History of the 3/2nd Punjab Regiment (Presented by the Regiment..)	.. 1927.	Col. H. C. Wylly.
6. History of the 3/1st Punjab Regiment (Presented by the Regiment.)	.. 1927.	
7. Artillery To-day and To-morrow. (Presented by Messrs. W. Clowes & Sons, Ltd., London.)	1928.	Col. H. Rowan-Robinson.

BOOKS PRESENTED—(contd.).

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
8. Oude in 1857 (Presented by Messrs. Williams & Norgate, London.)	.. 1928.	Col. John Bonham.
9. On Future Warfare (Presented by Messrs. Sifton Praed & Co., Ltd., London.)	.. 1928.	Col. J. F. C. Fuller.
10. Polo Pony Training—with Hints on the Game. (Presented by Messrs. Gale & Polden, Aldershot.)	1928.	Col. F. W. Ramsay.
11 Handbook of the Swiss Army (Presented by the War Office.)	.. 1924.	Official.

BOOKS PURCHASED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. The Beginnings of Organised Air Power	.. 1927.	J. M. Spaight.
2. The First Flight Across the Polar Sea.	..	R. Amundsen and Lincoln Ells- worth.
3. Masters of War	.. 1927.	D'Esterre.
4. Navies and Nations	.. 1927.	H. C. Bywater.
5. Who's Who 1928	..	..
6. In the Hands of the Arabs	..	Zetton Buchanan.
7. Reputations	.. 1928.	B. H. Liddell Hart
8. Office Organisation and Manage- ment.	1926.	L. R. Dicksee and H. C. Blain.
9. Efficiency Methods	.. ..	M. & A. D. McKillop.
10. Hunting the Fox	.. 1925.	Lord Willoughby de Broke.
11. Official History of the Great War.. Military Operations, Egypt and Palestine, Vol. I, with Maps	1928.	Sir George MacMunn and Capt. Cyril Falls.
12. The World Crisis by Winston Churchill—A Criticism	..	Lord Sydenham of Combe.

BOOKS PURCHASED—(contd.).

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
13. India by Air ..	1927.	Sir Samuel Hoare.
14. Elementary Economics ..	1926.	S. J. Chapman.
15. The Life of Lord Curzon, Vol. I ..	1928.	Earl of Ronaldshay.
16. List of Officers of the Bengal Army 1758—1843, Part II ..	1928.	Maj. V. C. P. Hodson.
17. Adventures in Turkey and Russia	1924.	Colonel Keeling.
18. The Somme ..	..	A. D. Gristwood.
19. Genius and Character ..	..	Emil Ludwig.
20. History of the British Army, Vol. XII ..	..	Hon J. W. Fortescue.
21. The India We Served ..	1928.	Sir Walter R. Lawrence.
22. Our Inheritance ..	1928.	Stanley Baldwin.

BOOKS ON ORDER.

<i>Title.</i>	<i>Author.</i>
1. Army and Sea Power ..	Majors H. C. Eady and R. A. Pargiter.
2. China in Turmoil ..	King.
3. Five Years in Turkey ..	L. van Sanders.
4. Memoirs of Prince Max of Baden..	..
5. Customs, Manners and Ceremonies of the Hindus.	Abbe Dubois.
6. Bismark ..	Emil Ludwig.
7. Studies of An Imperialist of War, India and Socialism.	Lord Sydenham.
8. The Life of General Lord Rawlinson of Trent.	Sir F. Maurice.
9. Stalky's Reminiscences ..	Maj.-Genl. L. C. Dunsterville
10. The Regimental History of the Somerset Light Infantry ..	Edwin Wyrall.
11. The National Policy and Naval Strength ..	Sir H. W. Richmond.
12. A Gallant Company ..	J. W. Fortescue.
13. The War in the Air, Vol. II ..	Air Ministry.

IX.—Pamphlets.

The following may be obtained by V. P. P., plus postage, on application to the Secretary :—

- (a) British and Indian Road Space Tables (separately), As. 12 each.
- (b) Diagram of Ammunition Supply (India), As. 4.
- (c) Diagram showing New System of Maintenance in the field at Home, As. 8.
- (d) Military Law Paper, Questions and Answers, As. 4. (As used at the A. H.-Q. Staff College Course, 1926).

1. *The Beginnings of Modern Air Power* .. 1920. J. H. ...
2. *The First Flight Across the Desert* .. J. ...
3. *Masters of War* .. 1920. ...
4. *Nations and Nations* .. 1920. ...
5. *Who's Who 1926*
6. *In the Hands of the Arabs* .. Zetina ...
7. *Reputations* .. 1920. B. H. ...
8. *Office Organisation and Management* 1926. L. R. Dicksee and H. C. Blain.
9. *Efficiency Methods* M. & A. D. McKillop.
10. *Hunting the Fox* .. 1925. Lord Willoughby de Broke.
11. *Official History of the Great War... Military Operations, Egypt and Palestine, Vol. I, with Maps* 1928. Sir George MacMunn and Capt. Cyril Falls.
12. *The World Crisis by Winston Churchill - A Criticism* .. Lord ... of

BOOKS PURCHASED—(contd.).

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
India by Air	.. 1927.	Sir Samuel Hoare.
Elementary Economics	.. 1926.	S. J. Chapman.
The Life of Lord Curzon, Vol. I	.. 1928.	Earl of Ronaldshay.
List of Officers of the Bengal Army 1758—1843, Part II	.. 1928.	Maj. V. C. P. Hodson.
Adventures in Turkey and Russia	1924.	Colonel Keeling.
The Somme	.. ..	A. D. Gristwood.
Genius and Character	..	Emil Ludwig.
History of the British Army, Vol. XII	..	Hon J. W. Fortescue.
The India We Served	.. 1928.	Sir Walter R. Lawrence.
Our Inheritance	.. 1928.	Stanley Baldwin.

BOOKS ON ORDER.

<i>Title.</i>	<i>Author.</i>
1. Army and Sea Power	.. Majors H. C. Eady and R. A. Pargiter.
2. China in Turmoil	.. King.
3. Five Years in Turkey	.. L. van Sanders.
4. Memoirs of Prince Max of Baden..	..
5. Customs, Manners and Ceremonies of the Hindus.	Abbe Dubois.
6. Bismark	.. Emil Ludwig.
7. Studies of An Imperialist of War, India and Socialism.	Lord Sydenham.
8. The Life of General Lord Rawlinson of Trent.	Sir F. Maurice.
9. Stalky's Reminiscences	.. Maj.-Genl. L. C. Dunsterville
10. The Regimental History of the Somerset Light Infantry	.. Edwin Wyrall.
11. The National Policy and Naval Strength	.. Sir H. W. Richmond.
12. A Gallant Company	.. J. W. Fortescue.
13. The War in the Air, Vol. II	.. Air Ministry.

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The following may be obtained by V. P. P., plus postage, on application to the Secretary :—

- (a) British and Indian Road Space Tables (separate), As. 12 each.
- (b) Diagram of Ammunition Supply (India), As. 4.
- (c) Diagram showing New System of Maintenance in the field at Home, As. 8.
- (d) Military Law Paper, Questions and Answers, As. 4. (As used at the A. H.-Q. Staff College Course, 1926).

X.—Schemes.

The schemes in the Institution have been considerably increased and in order to simplify their issue they have been classified and numbered as follows :—

They can all be obtained by V. P. P., plus postage, on application to the Secretary.

(A) Administrative Exercise, with diagram (Reprinted May, 1928).

To illustrate the supply system of a Division (suitable for Staff College or Promotion) .. Rs. 2

(B) Mountain Warfare (Reprinted May, 1928)

(i) A scheme complete with map and solution .. ,, 5

(ii) Three Lectures on Mountain Warfare .. ,, 3

(C) New Staff College Series (Reprinted May, 1928). Complete with maps and solutions :—**(i) Approach March.**

Reconnaissance of night attack.

Orders for night attack Rs. 5

(ii) Outposts.

Defence.

Action of a Force Retiring ,, 5

(iii) Move by M. T.

Occupation of a defensive position.

Counter-attack ,, 5

(D) Promotion Series (Reprinted May, 1928). Complete with maps and solutions.**Lieutenant to Captain—**

(i) Mountain Warfare Rs. 5

(ii) Defence.

Attack orders ,, 5

Captain to Major—**(i) Outposts.**

Defensive position.

Withdrawal ,, 5

(ii) Tactical Exercise without troops.

Reconnaissance.

Attack orders ,, 5

(E) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War." As. 12.**(F) Copies of the recent (February 1928) Staff College Examination papers are available :—**

Strategy and Tactics Papers with Maps .. Rs. 2 each.

Other papers ,, 1 each.

(G) *Staff College Course Schemes (1928) :—*

(i) A set of three schemes, as given at the Army

Head quarter Staff College Course, 1928, complete with maps and solutions, complete set .. Rs. 9

A limited number of the following papers are available :—

- (ii) Supply Problem (with map and answers) .. Rs. 2 each
- (iii) Military Law Paper (with answers) .. As. 8 „
- (iv) Organization and Administration—Peace (with notes for replies) .. „ 8 „
- (v) Precis of lecture on Organization and Administration .. „ 8 „
- (vi) Hints on Working for the Examination and on tackling the Tactical Papers .. „ 8 „
- (vii) Lecture on Military Law III—Precis .. „ 8 „
- (viii) Precis of Lecture on Reinforcements in War .. „ 8 „
- (ix) Precis of Lecture on Night Operations .. „ 8 „
- (x) Precis of Lecture on Bush Warfare .. „ 4 „
- (xi) Waterloo Campaign 1815 (with map) .. Re. 1 „
- (xii) Precis of Lecture on East Prussian Campaign, 1914—(I.—Battle of Tannenberg) .. As. 8 „
- (xiii) Precis of Lecture on East Prussian Campaign, 1914—(II.—The Battle of the Masurian Lakes ; and General Lessons) .. „ 8 „
- (xiv) Precis of Lecture on Palestine Campaign .. „ 12 „
- (xv) Lecture on R. A. F. Organization and General Employment .. „ 8 „
- (xvi) Lecture on R. A. F. Co-operation with the Army .. „ 8 „
- (xvii) Precis of Lecture on the Employment of Cavalry with a Brigade of all Arms .. „ 8 „
- (xviii) Precis of Two Lectures on the Organization of the British Army .. „ 8 „
- (xix) Precis of Lecture on Ordnance Services with Special Reference to Movement on Transportation .. „ 8 „
- (xx) Precis of Lecture on the Dominion Forces .. „ 8 „
- (xxi) Precis of Lecture on the Armoured Force .. „ 8 „
- (xxii) Precis of Lecture on the Auxiliary and Indian Territorial Forces .. „ 8 „
- (xxiii) Precis of Lecture on the Artillery Organization .. „ 8 „

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

Prize Essay Gold Medallists.

(With Rank of Officers at the date of the Essay.)

- 1872..ROBERTS, Lieut.-Col. F. S., v.c., c.B., B.A.
 1873..COLQUHOUN, Capt. J. S., B.A.
 1874..COLQUHOUN, Capt. J. S., B.A.
 1879..ST. JOHN, Maj. O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., s.c.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry.
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cav. Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver Medal).
 1899..NEVILLE, Col. J. P. C., s.c.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., d.s.o., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., d.s.o., R.F.A.
 1905..COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., B.A.
 1909..MOLYNEUX, Maj. E. M. J., d.s.o., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a Silver medal).
 1911..Mr. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., d.s.o., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., m.v.o., Q.V.O., Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., v.d., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., m.c., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., d.s.o., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., d.s.o., o.B.E., R.F.A.
 1923..KEEN, Colonel F. S., d.s.o., I.A.
 1926..DENNYs Major L. E., m.c., 4112th Frontier Force Regiment.
 1927..Hogg, Major D. Mc. A., m.c., R.E.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., v.o., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* *N. B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (especially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894..O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909..MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(concl'd.).

- 1910.. **SYKES**, Maj. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911.. **LEACHMAN**, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912.. **PRITCHARD**, Capt. P. P. A., 83rd Wallahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913.. **ABBAY**, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914.. **BAILEY**, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915.. **WATERFIELD**, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916.. **ABDUR RAHMAN**, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917.. **MIAN AFRAZ GUL**, Sepoy, Khyber Rifles.
- 1918.. **NOEL**, Capt. E. W. C. (Political Department).
- 1919.. **KEELING**, Lt.-Col. E. H., M.C., R.E.
ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920.. **BLACKER**, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921.. **HOLT**, Major A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922.. **ABDUL SAMAD SHAH**, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923.. **BRUCE**, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department.
- 1924.. **HAVILDAR RAHMAT SHAH**, N.-W. F. Corps.
NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925.. **SPEAR**, Captain C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926.. **HARVEY-KELLY**, Major C. H. G. H., D.S.O., 4/10th Baluch Regiment
- 1927.. **LAKE**, Major M. C., 4/4th Bombay Grenadiers
- 1928.. **BOWERMAN**, CAPTAIN J. F., 4/10th D. C. O., Baluch Regiment.
MUHAMMED KHAN, Havildar, Zhob Levy Corps.

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EDITORIAL.

The death of Lord Haldane removes another of the great men of the War, and one who was very greatly concerned with the part played by Great Britain in it.

The organisation and quick despatch of the British Expeditionary Force to France in 1914 was only possible by his efforts and by his foresight.

The extent to which the nation was indebted to him was never recognised during his lifetime and is only now being really realised. The wave of unpopularity and distrust which caused his removal from office at the beginning of the War put him into the background and embittered the last years of his life, but to those who knew, such as Lord Haig, Lord Haldane was even then recognised as perhaps the greatest War Secretary we have ever had.

The Expeditionary Force which he created was, unlike the organisation which preceded it, a war organisation. In creating it Lord Haldane's motto was "Will it work in war?" and everything which could not, was ruthlessly scrapped.

Almost as great a work was the creation of the Territorial Force, and it was not his fault that it was not made better use of in the Great War. It is, however, a great tribute to Lord Haldane that the Territorial Army is now recognised as our second line of defence on which the expansion of our military forces must be based in time of war.

In the sphere of politics and philosophy he was recognised as one of the finest intellects of our public life, but it is as Secretary of State for War in those crucial years of preparation from 1905 to 1912 that Lord Haldane will be remembered by the British Army.

* * * * *

The correct attitude of the soldier towards the present campaign for the abolition of war is a difficult problem.

The soldier is apt to be looked on with suspicion whatever opinions he may hold on the matter.

If he counsels caution and quotes history to support his argument by calling attention to the wave of pacifism which has nearly always been experienced after a war of any magnitude, he is considered as a militarist anxious for war as a means of climbing the ladder of military fame.

If, on the other hand, he goes with the stream and counsels the abolition of armies and armaments he is undoubtedly endangering the safety of the Empire.

Europe is only just starting to recover from the devastating effects of the last war and there is a strong wave of anti-war feeling among all those nations who experienced the last war, and also among those nations who did not experience the last war but feel that, either by reason of their military weakness or from other causes, they should at all costs avoid participating in the next.

This general anti-war feeling is natural and the soldier can only be in entire sympathy with it. No one who lived for any length of time in the operations zone in the last war can want to repeat the experience.

The fact remains, however, that new potential storm centres have arisen and we must not be led into the idea that the nations of the East are as averse from war as those of the West.

By all means let us reduce our armed forces to the lowest margin of safety—but there must be a margin and we must see to it that the forces we are left with are as efficient as it is humanly possible to make them.

* * * * *

The new regimental and battalion organisation has produced interesting problems of tactical handling in the field.

The cavalry regimental commander, used to operating with two squadrons leading and a third in reserve ready to support either flank, now finds himself only left with a machine-gun squadron which is not suitable for employment in the same manner. Ought he therefore to only now commit one sabre squadron to start with, keeping a sabre squadron and a machine-gun squadron in hand?

Similarly, in the battalion, the O. C. could put two companies forward, could count on his third company as something which he could put in to restore the situation on either flank and still have a company in reserve for emergencies. Now, when his third company is gone, he only has his machine-gun company left which is not so suitable for offensive action.

These are some of the problems which must be engaging the attention of the Army at Home in their summer training this year.

* * * * *

The increase of machine-guns has, of course, enormously increased the defensive power of the unit for the machine-gun is at its best in the defence. To use it with success offensively requires initiative, bold handling by junior leaders, a high standard of training, and favourable ground.

In their great offensive in France in March 1918 the Germans had given considerable thought to this important problem. They pushed their light machine-guns well forward with the leading infantry, often carrying them in stretchers, and supported them by their heavy machine-guns carried in hand carts, but the system broke down completely in front of Arras, where there was no fog to blind the machine-gunners of the defence.

The great difficulty is to get the guns well forward and into action without undue casualties during the process.

Many solutions have been put forward, of which a low self-propelled mounting, capable of going over fairly rough ground, is perhaps the most popular. Then comes the question of its vulnerability on the move—we give it armour and at once the tank enthusiast says “why not put it in a tank and scrap the infantry?”

Whatever may be the eventual solution, there is no doubt that the pressing problem is how to get forward in the attack, and, if the increase in machine-guns is to assist materially in this object, the tendency in favourable ground may be to look on the rifle as a support and guard to the machine-gun rather than *vice versa* as has been done in the past. But in really difficult country such as the N.-W. Frontier of India it is unlikely that the rifleman will ever be displaced, if only on the ground of mobility.

* * * * *

The introduction of battalion and regimental anti-tank weapons is a great step forward.

It has again made the infantry a self-supporting unit, able to defend themselves against every eventuality, but still only able to take successful offensive action by means of the co-operation of all arms.

The action of these unit anti-tank weapons should be co-ordinated, but they should not be brigaded in the same way as machine-guns. The whole object of giving the unit A. T. weapons of their own is that they should always have them handy for any eventuality and to meet surprise attacks of Armoured Fighting vehicles which have now to be expected from any direction. *

It has been reported that a suitable automatic rifle has been produced and tried out with successful results. It appears unlikely, however, that we should go to the expense of re-arming our infantry with it in these days of financial stringency.

* * * * *

Military Law and Strategy and Tactics proved the chief stumbling block to officers on the Indian Establishment at the recent Staff College Examination.

No less than 156 officers failed in Military Law and 136 in Strategy and Tactics, while only 3 came to grief in the History and Organisation of the Empire.

Although no candidate passed into Camberley without taking at least two optional subjects, there is a tendency on the part of candidates going up for their first attempt to embark on optional subjects without making reasonably certain of obtaining qualifying marks in the obligatory subjects.

Fewer officers on the Indian Establishment qualified than last year but the Simla "Backward Boys" came out of the examination creditably, their results being

5 passed Camberley.

7 passed Quetta.

10 qualified.

22 Total.

The numbers competing for the Staff College are increasing each year. This year 337 officers on the Indian Establishment went up for the examination.

* * * * *

The standard of tennis in India as compared with Home is curious.

The pick of the Indian players, our Davis Cup team, were, at Wimbledon, a class below the crack players. Even Mr. Sleem, India's acknowledged leading singles player, was outclassed by the fast all court game of the leading Continental and American players.

Of the ladies, exclusive of Mrs. Covell who is no newcomer to Wimbledon, not one from India survived a match in the qualifying tournament at Roehampton. The standard of ladies' tennis in England is very high—comparatively much higher than that of the men.

Excluding the leading French and American men, however, the Indian standard compares very favourably with that at Home. This applies especially to the Army players. Indian Army players won the Army singles and doubles at Home and every member of the Army team in the Inter-Services tournament was on leave from India.

The Indian standard of athletics generally is, however, lamentably below that of the European and American nations. In the recent Olympic games the performances of the Indian athletes were poor to say the least of it.

In the ranks of the Indian Army there must be better runners, if the incentive and encouragement were supplied to bring them forward and give them adequate training.

* * * * *

Two corrections must be made to the April number.

In discussing the decisions of the Home and Indian Governments with regard to the Skeen Committee report we stated "as regards the further expansion of vacancies, the Government could not accept the Committee's proposals for an increase by a time scale from the years 1929 to 1952, irrespective of whether efficient and suitable candidates were forthcoming."

The latter part of the above statement is, however, not correct, as on page 23 of the report of the Indian Sandhurst Committee we find it stated with regard to the time scale increase "It is not our purpose or desire that the number of Indian King's commissioned

officers in the Army should be increased without reference to considerations of efficiency. We recognise that in the Army there can only be one standard of efficiency, namely the highest. We hold strongly, therefore, that the severity of the existing tests should not be relaxed in any way, and, if Indians capable of satisfying these tests are not forthcoming, then the pace of Indianisation must for the time lag behind the number of vacancies offered."

In discussing the abolition of the lance as a weapon of war at Home we said that "Indian lancer regiments will continue to be armed with the lance." We should have been more correct to have stated "units armed with the lance in India will continue to be armed with the lance" as the lance is being retained as a weapon of war for all such regiments, both British and Indian, in India.

NARRATIVE OF OPERATIONS OF THE 11TH CAVALRY BRIGADE FROM 23RD OCTOBER TO 3RD NOVEMBER 1918.

By

LIEUT.-GENERAL SIR R. A. CASSELS, K.C.B., O.S.I., D.S.O.

PART I.

PREFACE.

1. Prior to operations commencing, the general dispositions of the enemy were calculated to be as shewn on Map E.

Summarised they were as follows :—

(a) Holding the Fathah position both banks—

2,620 rifles.

68 machine guns.

28 guns.

90 sabres.

(b) Holding the Humr.—Lesser Zab position—

2,910 rifles.

64 machine guns.

14 guns.

30 sabres.

(c) At Sharqat—200 rifles.

(d) On the Kirkuk—Altun Kupri line—

2,240 rifles.

42 machine guns.

30 guns.

330 sabres.

2. First Corps orders, issued on the 18th October, clearly indicated the general intention, the salient points of which were—

(a) That a column of 3 Sqdns. Cav., 1 Batty. R. F. A., 2 Bns. Infantry and 1 L. A. M. Batty., detailed by Third Corps, was to co-operate in the direction of Kirkuk and Altun Kupri so as to contain as many enemy as possible on that line and prevent the Turkish Kirkuk group moving down the left bank of the Lesser Zab against the right flank of the First Corps.

(b) That the main operation to be carried out by the First Corps and Attached Troops was to commence with an attack on the enemy holding the Fathah position with a view to securing the passage of the Fathah Gorge preparatory to advancing to the line of the Lesser Zab.

(c) That the above was to be carried out on the morning of the 24th October as follows :—

18th Division to attack the enemy holding the Fathah position left bank with the 7th Cavalry Brigade co-operating to the north of the Jabal Hamrin against the enemy in reverse.

17th Division to operate on right bank to facilitate the task of the 18th Division and 7th Cavalry Brigade on left bank.

3. Prior to the issue of orders above referred to, and as a result of reconnaissance made to the west of the Jabal Hamrin on the right bank, it had been decided, owing to the absence of water away from the Tigris itself and the inaccessibility of the latter for some 40 to 50 miles, that the employment of the 11th Cavalry Brigade against the enemy's right and rear was not practicable. It was found, on the other hand, that there were practically no water difficulties on the left bank while the country between the Jabal Hamrin and the Lesser Zab presented no obstacles to movement.

In view of the above, and in consonance with the general plan, the 11th Cavalry Brigade was given a special mission, instructions regarding which issued on the 21st October and were to the following effect (*vide* Map E).

The brigade was to move from Ain Khalid on the night 23/24th October so as to reach the Lesser Zab about Sadiyah on 24th October.

On the 25th October it was to operate down the Lesser Zab with the object of assisting the First Corps operations by—

(a) Intercepting movement to or from the left wing of the enemy Tigris group.

(b) Assisting in obtaining a bridgehead over the Lesser Zab preparatory to the arrival of the First Corps.

Note.—(Though this was as far as my instructions actually went, the Corps Commander had discussed with me all possible future eventualities. Amongst others, I was aware that I might be called upon to cross the Tigris above Sherqat any time after the 25th October. I was thus enabled to think and arrange ahead for this contingency.)

4. Preparatory to carrying out the above instructions the 11th Cavalry Brigade, marching up right bank, crossed the Tigris at Tekrit on the 22nd October and went into bivouac opposite the town.

In order to increase mobility and radius of action the following arrangements were made at Tekrit :—

(a) A dump was formed on the right bank at Tekrit, attached to the 17th Division, consisting of—

All sick men and animals.

Kahars of C. C. F. A.

Portion of Mob. Vet. Section.

Post Office.

All kits carried in A. T. carts.

(b) Utilizing the extra A. T. carts thus obtained it was found possible to arrange to carry the following rations when the brigade marched on the 23rd October :—

Unexpired portion of ration for man and horse—on man and horse.

1 day's emergency ration for man and horse—on man and horse.

2 days' rations men and 2 days' grain animals (no fodder) in transport.

(c) The services of a L. P. O. with cash and a Ford van were put at the disposal of the brigade by First Corps.

(d) An Arab guide with knowledge of country between the Jabal Hamrin and Lesser Zab was found and attached to the brigade and a party of " killeckchies " was collected and detailed to march with the transport.

(e) Arrangements were made with the First Corps to further increase our radius of action by putting in 2 days' rations for the brigade at Ain Khalid ; one for issue on the 23rd October on arrival at that place and the other to be conveyed in Ford vans to the Lesser Zab on the 24th, following the brigade.

5. I had been informed that the intention was to despatch the L. A. M. brigade on the 24th October to Hadhr with the idea that it should operate from there on the 25th October and subsequently against the enemy's L. of C. and rear about Sherqat, depending on circumstances.

PART II.

OPERATIONS 23RD—30TH OCTOBER.

The brigade marched from Tekrit (left bank) for Ain Khalid (distance 32 miles) at 0300, on the 23rd October and got into bivouac at that place by 1340, having halted, watered and fed at the south end of the Ain Nakhailah pass *en route*.

The transport reached bivouac at 1630 having also watered and fed.

In accordance with instructions I had received, I proceeded by car to Tel Abu Shahamah on the Ain Khalid—Tazah Road to meet General Lewin, Commanding Third Corps Column at 1200.

Having discussed the whole situation with him and after arranging for intercommunication between our respective commands during the forthcoming operations I returned to Ain Khalid and rejoined the brigade at 1500.

During the afternoon, orders for the following day's march to Sadiyah were issued—In these it was arranged that—

(a) The brigade should march at 0200 as follows:—

Advance Guard.—7th Hussars;

5th Field Troop.

1 Sect. " W " Battery, R. H. A.

1 Sect. 25th M. Gun Squadron.

Main Body. --Remainder of brigade—less slower moving details not urgently required.

(b) *Transport Column*—under escort of 1 squadron—consisting of —

" B " Echelon " W " Ammun. Column,

All water carts and cooks,

Tent Sub-Division C. C. F. A,

All A. T. carts with rations, etc,

to follow (a) as far as Hajal where it was to halt for night of 24/25th October.

(c) *Ford Van Convoy*—carrying 1 day's complete rations for Brigade—to follow at 0700 under escort to be found by O. C. Ain Khalid consisting of 2 L. A. M. cars, 3 Lewis gun detachments and a party of sappers.

The brigade marched at 0200 as arranged and reached Garha at 0605 where a halt was made to water and feed.

(*Note.*—The route followed by the brigade on this date is shewn on Map E).

At 0650 an aeroplane dropped a message from the First Corps to the effect that the enemy were reported by the 18th Division to have evacuated the Fathah position on left bank, while the 17th Division reported that the right bank was still held at 0300.

March was resumed 0730.

Advanced Guard reached Hajal at 1045 where an aeroplane landed and delivered a message from First Corps (timed 0800) to the effect that enemy had evacuated the Fathah position both banks and that our troops were pushing forward.

In view of the above change in the situation I decided to make straight for Uthmaniyat and informed First Corps (by aeroplane—copy to be dropped on 7th Cavalry Brigade) accordingly.

The Advanced Guard approached the Lesser Zab at the Zrariya Ford at 1445. At first there appeared to be no enemy in the vicinity. This was the conclusion a "contact" aeroplane, which arrived at 1500, also had come to, as it proceeded to land opposite the ford on the left bank. It was greeted, however, on landing, with heavy machine gun and rifle fire from the right bank at 600 yards range. The machine was badly damaged but the pilot and observer escaped unhurt. The enemy now also disclosed 4 field guns and it was evident that the ford was held in some strength—the enemy being disposed covering the ford, on the right bank.

The presence of this enemy detachment at Zrariya was unexpected but at the same time it was equally clear that our arrival was a surprise to them. In view of this and as it was getting late I decided to force a crossing at once. By 1545 a difficult but practicable ford (4½ feet deep) was discovered about 1 mile below the recognised Zrariya ford.

Meanwhile the section of "W" Battery had engaged the enemy covering the latter. Under cover of this fire the 7th Hussars with a section of the 25th Machine Gun Squadron were ordered to cross the river at the ford which had been discovered.

At 1600 another "contact" plane arrived and proceeded to spot for the guns.

By 1630 the 7th Hussars had crossed the river and having gained a footing on the bluffs overlooking the river on the right bank started to work round the enemy's right. This movement combined with the accuracy of our gun fire on the left bank proved too much for the enemy.

At 1640 they commenced to withdraw in a north-westerly direction leaving a detachment which was engaged with the 7th Hussars till after dark.

In this engagement the strength of the enemy was estimated at 800 infantry with machine guns, 4 guns and some cavalry. Our casualties amounted to 2 B. O. Rs. killed and 1 B. O. and 10 B. O. Rs. wounded (all 7th Hussars on right bank).

Though the enemy guns fired some 200 rounds they caused practically no casualties. Our guns, on the other hand, thanks to aeroplane observation, were most effective. The 7th Hussars captured 7 prisoners.

At 1745 orders were issued to the 7th Hussars to maintain a bridge-head on the right bank covering the place they had crossed and to keep in touch with the enemy during the night.

The Main Body arrived at 1800, by which time it was getting dark, and went into bivouac on the left bank opposite the 7th Hussars with orders to be ready to move at 0530 next morning if necessary. The length of the day's march was estimated at from 45 to 50 miles.

At 2200 a report was received that the Ford Convoy had reached a point some 2 miles from our bivouac in a southern direction and that it was held up by an obstacle and would remain there until next morning.

During the night some intermittent firing took place on the right bank.

Owing to the wireless machine breaking down it was not possible to communicate with anyone during the afternoon of the 24th and night of 24/25th October.

By 0600 on the 25th it was evident that the enemy had all withdrawn during the night and it was believed that they had gone towards the Tigris.

Steps were immediately taken to establish a bridge-head at Zrariya, to get a ferry working and to issue rations from the Ford Convoy which was about to arrive. Orders were also sent by despatch rider to the Transport Column at Hajal to join the brigade at Zrariya at once.

The ford at Zrariya was found to be 3 feet deep with hard bottom but the approaches on both banks proved very heavy going owing to deep sand and the cliffs on the right bank were found to be steep, necessitating ramping.

At 0700 an aeroplane landed bringing several messages from First Corps which made the general situation on the preceding day clear, and contained orders (timed 1830 and 2345) for operations for the 25th October. The latter were to the following effect :—

(a) That enemy had fallen back on both banks roughly to their Lesser Zab—Humr position.

(b) That 17th Division were to advance on right bank and get into touch with and engage the enemy on this bank, assisted by 18th Division's guns on left bank.

(c) That 18th Division were to assist the 17th Division in their advance and secure a crossing over the Zab—the 7th Cavalry Brigade being pushed across this river to threaten enemy's left.

(d) That 11th Cavalry Brigade was to co-operate in the latter operation.

Aeroplane left for First Corps with details regarding our yesterday's operations and the situation up to date.

At 0830 I despatched two L. A. M. cars (which had joined me during afternoon, 24th, after escorting Ford Convoy up to Hajal) down the left bank of the Zab to get into touch with 7th Cavalry Brigade and to warn them that a column from my brigade would be coming down the right bank of the Zab during the morning to co-operate with them. These returned at 1020 and reported that the leading troops of the 7th Cavalry Brigade had crossed the Zab about 0900 at Shumait.

Meanwhile all arrangements at Zrariya Ford were progressing satisfactorily.

At 1030 I started off with a column consisting of 23rd Cavy., 1 Section "W" Battery and 1 Section 25th M. Gun Sqdn. down the right bank of the Zab to co-operate with the 7th Cavalry Bde. in accordance with my instructions.

Before leaving I had issued orders for the Ford Van Convoy to be returned to Fathah direct, as soon as possible, taking with it the wounded and prisoners. The remainder of the brigade was warned to be ready to march at short notice.

From aeroplane reports received up to 1230 it was clear that the 7th Cavalry Brigade had pushed some way up the Tigris left bank apparently unopposed.

Directing my column therefore to march in a north-westerly direction I went on ahead in a car and met G. O. C. 7th Cavalry Brigade near and to the north-east of Nami at 1445. It appeared from what he told me that there were no Turks on the left bank, all having crossed to right bank at Humr Bridge. I therefore decided to withdraw my detachment to Zrariya and returned there myself by car at once.

On getting back to Zrariya I found that I was in a position to move early next morning, if required, rationed up to the 27th October. I reported this and the result of the day's operations to First Corps accordingly and issued orders for the brigade to be ready to march at 0530 next day (timed 1910).

At about 2000 I received a message from First Corps ordering me to push on to Sherqat, crossing ford above that place, if I was in a position to feed myself up to the 27th October. About an hour later First Corps orders (time 1841) were received which were to the following effect :—

(a) That the enemy having withdrawn to the right bank would probably retire northwards during night 25/26th October leaving rearguards.

(b) That there was a possibility of enemy having received or being about to receive reinforcements *via* Erbil.

(c) That the general intention was to pursue vigorously.

(d) That the following moves were accordingly to take place as early as possible :—

11th Cavalry Brigade to ford 13 miles above Sherqat to intercept enemy's retreat.

Fanshawe's Column direct to Sherqat left bank moving before daylight.

This column consisted of the—

7th Cavalry Bde.,

2 Troops 32nd Lan.,

1 Bde. R. F. A.,

1 Sect., 60 prs.,

1 Infy. Bde. of 18th Divn. with No. 2 Bridg-
ing Train less Bridge on Lesser Zab.

17th Division to gain ground during night and pursue on right bank.

(Note.—Fanshawe's Column was subsequently cancelled as shown later).

During the night orders were issued :—

(a) For the 2 L. A. M. cars with the brigade to proceed next morning down left bank Zab—to get across by bridge, which it was believed was being made at its mouth, and to rejoin the brigade opposite Sherqat as soon as possible.

(b) For empty carts, field kitchens and “lame ducks” in the way of men and horses to move down left bank of Zab next morning and report to 18th Division.

By 0630 on the 26th the brigade, having crossed the Zab by the Zrariya Ford, assembled on the right bank and marched off in a north-westerly direction.

Note.—Route taken by brigade on this date is shewn on Map E.

The brigade moved in three bodies as on the 24th October. In crossing the ford the following were lost :—

1 Indian Driver,	
12 horses,	
2 caissons,	) and their contents,
1 L. G. S. wagon	
and several packs.	

While on the march and between 0900 and 1100 I received the following information by messages dropped by aeroplane :—

(a) That 3rd Corps Column had occupied Kirkuk at 0300 that morning. (First Corps message timed 0930).

(b) That previous orders regarding Fanshawe's Column had been cancelled—that 18th Division were to throw bridge across Lesser Zab and improve bridge-head and help 17th Division attack on right bank—that 7th Cavalry Brigade were to move towards Sherqat to prevent enemy escaping to left bank. (First Corps message timed 0820).

(c) That the 7th Cavalry Brigade were just north of the Zab and opposite Humr at 0830.

(d) That the left bank Tigris was clear of enemy up to 15 miles north of Sherqat.

At 1100 the brigade halted and fed. *Note.*—No water was found *en route*.

At 1300 I received news by aeroplane that the L. A. M. Bde. was astride the Mosul Road north of Sherqat on the right bank and had cut the telegraph wire.

At this hour the head of the brigade reached a point about 7 miles east of Huwaish from where a good view of the right bank opposite was obtained and it was noticed that the Huwaish Gorge looked a likely place for the brigade to make for in the first instance.

The most important thing however at that time was to find a ford across the Tigris, which prior to operations commencing had been reported by an agent to exist somewhere opposite Jarnaf.

Reconnaissances were sent out accordingly on a wide front.

At 1530 a ford was discovered opposite Hadraniyah through the help of a local Arab picked up at a village opposite that place. The ford was a difficult one and entailed crossing 3 branches of the river—the last (nearest to right bank) being nearly 5 feet deep in its deepest part, with a swift current.

At 1545 I reported by wireless to First Corps that a ford had been found and that the brigade was crossing at once. Also that so far, no Turks had been observed on either bank.

(*Note.*—All future references, unless otherwise stated are to Map A).

By 1630 the Guides Cavalry had crossed and reached Hadraniyah where a Turkish hospital was found in a building which contained 4 medical officers and 80 sick Turks. Leaving a small guard to take these over I accompanied the Guides at the gallop to Huwaish Gorge; having left instructions for the 23rd Cavalry, M. Gun Sqdn. and Section "W" Battery who were then engaged in crossing, to join me at that place as soon as possible.

On reaching the Huwaish Gorge at 1710 unopposed, the strength of the position was at once self-evident, and I decided to hold it for the night at any rate.

By 1830 the troops which had crossed were disposed as follows :—

Guides Cavalry, M. G. Sqdn.	In position astride the Mosul Road
less 1 Section.	on the north bank of the Wadi al Muabbah.

Section "W" Battery	.. In action on the road to the north-east of Huwaish Ruins.
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23rd Cav. and one Section	In reserve behind bluff and to the north-west of the Ruins.
M. G. Sqdn.	

Bde. Hd. Qrs.	.. At the Ruins.
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The remainder of the brigade remained for the night on the left bank opposite the ford—where the Transport Column arrived at 2000.

Signalling communication by lamp was established between B. H. Q. and the left bank. The wireless had to remain for the time being on the left bank as the ford was too deep to allow of the machine being taken across on horses without risk of loss or damage.

At 2040 a wireless message was despatched to all concerned (including O. C., L. A. M. Bde.) giving my position and asking First Corps to direct O. C., L. A. M. Bde. to report to me next morning.

At 2140 another message was sent to First Corps saying that I proposed advancing down the right bank of the Tigris next day and that I felt confident, if the 17th Division advance was pressed, that the Turkish Force on the right bank would cease to exist by the evening next day.

(*Note.*— I had had no news up to date of the progress of the 17th Division on this day nor of the 7th Cavalry Brigade but assuming that all had gone well in accordance with orders issued, it certainly looked as if the Turkish Force was in a tight place).

At 2200 orders were issued for the remainder of the fighting troops of the brigade (less 1 Sqdn. 7th Hussars) to join me at Huwaish early next morning.

Remainder to remain on left bank under escort of 1 Sqdn. 7th Hussars.

Ferry to be established in square C'Z 76 c (map B) as early as possible.

At 0030 on the 27th I received First Corps message (timed 1745) of 26th October, to the effect :—

(a) That the right bank attack had made no progress during 26th ;

(b) That air reconnaissances tended to show that the Turkish reinforcements from Erbil had crossed the Tigris and were in the Sherqat area ; and

(c) Asking where I should like Ford Convoy to be sent on 27th.

On receipt of the above the following messages were despatched :—

(a) To First Corps.—Asking for Ford Convoy to be sent up left bank to my position on that bank. Asking for situation on left bank

downstream of my position and the whereabouts of the 7th Cavalry Brigade. Asking for 18 shrapnel to be sent up.

(b) To 7th Cavalry Brigade asking where they were.

The night passed quietly and without incident.

At 0600 a squadron of the 23rd Cavalry was despatched to make a preliminary reconnaissance to the south.

They bumped into the enemy, almost immediately, in position about $2\frac{1}{2}$ miles to the south of Huwaish.

The first estimate of their strength was from 400—500 infantry with machine guns and at least 3 guns which were disclosed at once and which subsequently were turned on to our L. A. M. Bde., which could be seen working over the ground 3 to 4 miles to the south-west of Huwaish.

Sending instructions to the squadron to remain in observation I decided to attack the enemy as soon as my guns had got into action and I had received some news from my contact aeroplane which I was expecting shortly.

My object in deciding to attack was to make the enemy disclose his strength and dispositions and to conceal my weakness. I hoped also, in the event of my being able to eject him from the above position, to hold the same as my forward line with the Huwaish line as my main one.

At 0745 an aeroplane dropped a message containing First Corps Orders for the 27th October (timed 1920, 26th Oct.).

They were to the following effect :—

(a) That the enemy were still holding their Humr position and that the 17th Division were to attack vigorously on the 27th.

(b) That the 18th Division were to assist 17th Division by fire from the left bank.

(c) That 7th Cavalry Brigade were to move to Shuramiyah (*vide* Map E) to Corps Reserve.

Air reports received from contact aeroplanes soon after indicated that :—

(a) There was a general movement on the part of the enemy towards Sherqat from the Humr position, which looked as if they had abandoned the latter position during the night.

(b) That a large portion of the enemy had already collected at, or some 4 miles to the south of Sherqat.

(c) That some 500 infantry and guns were astride the road at C Z 93 c, $2\frac{1}{2}$ miles to the south of Huwaish.

Meanwhile patrols on left bank reported that there were no signs of enemy either upstream or downstream of our bivouac on that bank.

At 0900 I reported the situation to First Corps and 17th Division giving gist of aeroplane reports just received and my intention to attack enemy nearest to me in the hopes of securing his line as my forward position.

The position of the L. A. M. Brigade to my right front was also mentioned and I added that vigorous action on the part of the 17th Division seemed indicated.

By this hour a ferry had been completed about $3\frac{1}{2}$ miles downstream of the ford and vehicles containing stores and supplies which were required on the right bank had been collected there. The tent sub-division of the C. C. F. A. was also established there soon afterwards.

At 1115 I received First Corps message (timed 0840) by aeroplane to effect that 17th Division patrols confirmed aero reports regarding no enemy movements or troops at Humr, Qalat-al-Bint and Ain Dibs (see Map E) and that 18th Division were to form and immediately despatch a column up left bank to block enemy ferry near Sherqat and push forward thence to ford opposite Hadraniyah.

At 1210 I received an aeroplane report stating that, with the exception of the enemy detachment already reported astride road at C Z 93 c, no movement observed between latter and Sherqat—that a large movement of enemy troops was still going on towards Sherqat from the south and that 3,000 were already at Sherqat.

At the same time I received a report from a patrol which I had despatched up the Mosul Road to the effect that enemy infantry about 400 strong were advancing south along Mosul Road and were at 1120 about 5 miles north of Shahalah, i.e., about 14 miles north of Huwaish.

At 1215 I despatched a squadron of the 7th Hussars to hold up above detachment.

Meanwhile the whole of "W" Battery had got into action with 4 guns on the high ground about 1,500 yards west of north of the Huwaish

Ruins and 2 guns in the plain on the same alignment east of north of the ruins and a central observation post at the ruins themselves from where an excellent view of the country to the south and south-west and west could be obtained.

At 1230 the 23rd Cavalry accompanied by a section of 25th M. Gun Squadron advanced rapidly down the Mosul Road and attacked the enemy in their position astride the road about C Z 93 c under cover of the guns, the main attack being directed with conspicuous dash against the enemy's left.

The enemy disclosed his strength and exact position from the first and gave the guns several good targets which were taken the fullest advantage of. It was also evident that the original strength of the enemy had been underestimated. There were at least 800 to a 1,000 infantry with machine guns and 4 guns were disclosed. Feeling satisfied that my main object had been attained I decided to give up any further idea of ejecting the enemy from his position, and ordered the 23rd Cavalry to withdraw at once, while "W" Battery continued to keep up a steady fire and made an accurate register of targets in view of possible future developments.

At 1325 O. C., L. A. M. Brigade reported to me personally at Huwaish Ruins and received the following instructions :—

(a) Two cars to be despatched about 12 miles up the Mosul Road and on return to report to me.

(b) The remainder of L. A. M. Brigade to remain in observation 5 miles south-west of Huwaish and in the event of enemy turning movement round my right flank to stop it at all costs.

At 1445 I received an air report to the effect that the enemy were seen digging on a line some 2 to 3 miles south of Sherqat ; estimated strength on this line 2,000—3,000.

In view of all air and other reports received by me during the day and up to this time the general situation appeared to be as follows :—

(a) Whole Turkish Force on the right bank.

(b) 2,000—3,000 Turks preparing to meet 17th Division (coming up right bank) some 2 to 3 miles south of Sherqat.

(c) A 1,000 Turks facing my brigade, $2\frac{1}{2}$ miles south of Huwaish.

(d) Remainder of Turks (anything from 4,000 to 5,000) at or near Sherqat.

(e) A Turkish detachment moving south along Mosul Road some 12 to 14 miles north of Huwaish watched by one squadron.

(f) 18th Division Column from Lesser Zab moving up left bank.

(g) 7th Cavalry Brigade at or *en route* to Shuramayah.

At 1500 a wireless message was sent to First Corps and 17th Division giving result of the recent engagement and stating that it was now my intention to fight anything sent against me on the Huwaish line. I also enquired regarding the progress of 17th Division, as I had had no news of them all day.

At 1635 I sent by hand of an officer a message to the G. O. C., 18th Division Column, moving up left bank, giving him a summary of the situation on the right bank—telling him that I had no news of the 17th Division—stating that it was possible enemy would make an early determined effort to break through me and suggesting, in this event, that he could best help by co-operation from left bank, between Sherqat and Qabr Gazi, and by sending me some infantry if available to my ferry at CZ 76 c.

Meanwhile I had received no further news of the progress of the enemy, northern detachment moving down the Mosul Road so concluded that the squadron sent to hold it up were successfully doing so, but at 1730 the two L. A. M. cars which had been sent up in that direction returned and reported that they had drawn fire from two camel guns on reaching a point opposite Shahalah.

Note.—These cars remained with me during the night.

At 1740 I reported to Corps that there was no change in the situation since the submission of my 1500 report.

At 2030 I received a wireless message from First Corps (time of despatch uncertain but prior to 0900 27th Oct.) stating that 18th Division Column left Lesser Zab at 0900 and consisted of, 1 infantry brigade, 2 troops cavalry, 2 60 pounders, 2 4.5 howitzers, and 1 battery 18-pounders with orders as already mentioned.

At 2130 I received a message from General Sanders (Commanding 18th Divisional Column moving up left bank) timed 1500 and sent by a cavalry patrol to the effect that he intended marching all night, that 18-pounder ammunition had already been sent ahead for me and that he would do his best to help.

At 2200 I received a wireless message from First Corps to the effect that 18th Division Column would reach Sudairat by 1830, that if

pressed I was to call upon Sanders for infantry and that the 7th Cavalry Brigade was being sent to reinforce me next day, the 28th October. On receiving the above I made out a message to Sanders amplifying the one sent at 1635 and despatched the same at 2240 by the hand of an officer. In this message I gave the three alternatives which I considered were now open to the enemy, viz:—

- (a) To escape to the east across the Tigris.
- (b) To hold me off and meet the 17th Division attack which was pending.
- (c) To leave a rear guard to hold off 17th Division and break through me ;

and stated that I considered (c) was the most likely.

I also emphasised the fact that I wanted the 18 pounder ammunition he had for me as soon as possible and infantry if he could spare them.

The rationing arrangements during the day were as follows:— Some sheep were purchased locally by the L. P. O. attached to the brigade. Rations were cooked by unit ration parties at ferry left bank and were subsequently ferried across to right bank together with grain for animals.

A large amount of jowari growing close to the position on right bank was also purchased and cut, and given to the horses as opportunity offered during the day.

During the night the brigade was disposed as under:—

Guides Cavalry and	..	Holding position astride road as before on north bank of the Wadial
M. G. Sqdn. (less 1		Section).
		Muabbah.

"W" Battery	..	In action as already indicated.
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7th Hussars (less 2	}	.. In reserve behind bluff north-west of Huwaish Ruins.
Sqns.) 23rd Cavalry.		
1 Section M. G. Sqdn.		
2 L. A. M. cars.		

1 Sqdn. 7th Hussars	..	In observation of enemy detachment about Shahalah.
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1 Sqdn. 7th Hussars	..	On left bank.
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Bde. Hd. Qrs.	..	At Huwaish Ruins.
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The night passed quietly, and dismounted patrols pushed south reported no movement on part of enemy towards the north or north-west.

At 0500 on the 28th, horses were saddled up ready to move.

At 0610 no enemy movement visible to south, south-west or west.

Shortly afterwards we established visual communication with Sanders' column on left bank about Ruins (CZ 94 a).

Received a report at same time that the 337th F. A. Brigade Ammunition Column with 836 rounds of 18-pounder ammunition had arrived at the ferry. This was most welcome news.

At 0640 I received a message from Sanders (sent by hand and timed 0330) saying that he would reach the ruins, south-east of Huwaisi at dawn and that he had 6 pontoons with him.

Reply sent to this at 0655 to effect that I had had quiet night—no indication yet of Turkish intention—that I was awaiting aeroplane report before deciding on course of action—that I should like his pontoons sent to ferry.

At 0700 the Turkish infantry, extended on a front of some 700 yards with their right on river, were seen advancing slowly but deliberately north directly against my position at a distance of some 2 miles.

Soon after, 3 of our aeroplanes were seen flying north up the right bank. While passing Sherqat, or the ground to the north of it, they drew the fire of the whole Turkish army—at least this was the impression I got from the volume of noise produced, which lasted fully 10 minutes.

At 0705 I despatched the 3 L. A. M. cars I had with me up the Mosul Road with orders to report to O. C. Squadron, 7th Hussars who still remained in touch with the enemy, northern detachment.

At 0715 I received a message from the O. C. this squadron, which was then about 1 mile north-west of Jirnaf, that the enemy looked like advancing and had started working round his left. At the same time a message was despatched to Sanders telling him about the Turkish advance from the south and asking him to get his guns on to the m in enfilade, and to send infantry up to ferry as soon as possible.

At 0720 the Turks opened fire with his guns, field guns being turned on to my position while his howitzers (4.2") started by engaging Sanders' Column on left bank with apparently good effect.

(*Note.*—It was difficult at first to estimate the number of guns the Turks had in action against us but by the evening I came to the conclusion that there were probably 24. Contrary to the Turkish usual

practice to husband ammunition these guns kept up a steady fire all day and well into the night).

At 0745 I received a message from Sanders (timed 0630) telling me that his guns were in position and ready to knock out enemy's guns when found and asking me to do all I could to make him fire his guns.

A reply was sent at 0750 to effect that enemy had already disclosed probably all his guns and that I hoped that his artillery had been able to locate them.

I added that I had received no aeroplane report so far and could not say in what strength the enemy were advancing against me but thought that they were in considerable numbers.

At 0800 Sanders informed me by helio that he had despatched the 17 Gurkhas to join me *via* the ferry.

At the same time I received an aeroplane message giving location of two of enemy batteries, *viz.*, at CZ 93 c 1/3 and at CS 3 c 1/6. No mention was made regarding strength of enemy.

The above information was passed to Sanders at once. Meanwhile the enemy continued to advance in strength but slowly, due to the great accuracy of the fire of "W" Battery guns, which opened at the moment the advance was observed to start, and the co-operation of Sanders guns on left bank which were being ranged on to the "bursts" of "W" Battery.

At 0805 I decided to make a counter against the enemy's left and detailed the 7th Hussars to move off at once to carry it out. Their orders were (a) to approach the enemy's left (which was then about CZ 92 b 5/0) rapidly and without being seen, by moving across my front up the Wadi Muabbah for about a mile, and then left up a branch nullah, which lead to the west of CZ 92 central and (b) to attack suddenly from there to the left, according to circumstances.

At 0830 I received First Corps orders for the 28th (issued previous evening) telling me to call on Sanders (who was watching left bank up to me) for help if required and that my orders were to cut enemy's retreat with the co-operation of Sanders and Norton (commanding the 7th Cavalry Brigade).

Meanwhile the 7th Hussars had moved off as ordered.

At 0915 heavy firing could be heard in the direction of CZ 92 central which indicated that they had reached their objective. This

was very shortly confirmed by observation as the Turkish left were seen to start falling back.

At 0930 the following situation report was sent to First Corps :—

Shortly after 0700 Turks started advancing towards me from line CZ 93 c 2/3—CZ 92 c 5/8 in force. Up to present they have made no progress whatever as my guns can deal with any forward movement with perfect observation while Sanders guns from about CZ 94 are co-operating in enfilade with apparently great effect. I have one regiment enfilading Turkish left from vicinity CZ 92 central. Remainder of brigade is in position on my main line or in reserve.

Sanders has sent me a battalion which is now approaching my ferry. On arrival I shall have this further reserve. Have arranged to meet Norton on arrival and will get him across to right bank without difficulty. I am, of course, unaware of Turkish intentions but if he is trying to break through me with the bulk of his force he cannot do it.

(*Note.*—This and subsequent messages to First Corps were now being sent by cyclist despatch rider *via* ferry to Sanders Headquarters for transmission thence by cable).

At 1000 I received a report from O. C. Squadron watching enemy, northern detachment, that he had had to retire about a mile.

At 1015 the O. C., 7th Hussars reported that the enemy's left were making a further retirement and that he was following them up keeping on their left flank.

(*Note.*—This advance, as I learnt after, was carried out almost too boldly, for 1 squadron suddenly found themselves facing enemy guns which started firing at them at point blank range at 150 yards, fortunately with little effect).

At 1025 I gave the above information to Sanders so that his guns might be warned as regards range.

At 1100 two troops (7th Hussars) from left bank reinforced the squadron, 7th Hussars watching enemy, northern detachment on right bank.

At the same time it was observed that the Turks had commenced to advance again from the south on their original front but in small numbers, well extended, while large columns were seen to be moving north some $2\frac{1}{2}$ to 3 miles to the south-west of my position with the evident intention of working round my right.

This was confirmed at 1105 by the 7th Hussars who rejoined me at that hour after having carried out their task with conspicuous dash.

The 7th Hussars were now ordered to extend my line to the north-west covering the guns.

At 1140 Sanders was informed of the change in the situation. Meanwhile the enemy's columns, harassed by my guns, continued to make slow progress to the north past my right.

At 1215 therefore the 23rd Cavalry were ordered to further extend my right to the north-west and get into touch in the vicinity of CZ 65 central, with the 7th Hussars detachment watching the enemy northern ditto.

At 1230 I received by aeroplane, copy of First Corps message timed 1110 and addressed 17th Division, to effect that, according to air reports, there were no Turks to the south of Sherqat—that large numbers were in nullahs about CS 11 b and d, CS 12 a and c, and CS 2 d—that 17th Division were to push on vigorously and obtain close contact with above.

At the same time I received an aeroplane message giving me the following estimate of the strength of the enemy to my south-west at that time :—

At CZ 91 a 4/2	.. About 100 in a nullah.
About CZ 91 c 6/2	.. About 250.
Between about CZ 91 c and CZ 92 d	.. Some 2,000 in groups of 100 and 500 all moving north.
At CS 2 a 9/8	.. 100 behind a cliff, stationary.
At CS 2 a 2/5	.. 300 stationary.
Total	.. About 2,750.

(Note.—These presumably were in addition to some 200—300 who had already been seen to pass to the north of the Wadi Muabbah).

The above information was passed to Sanders at 1235 with a request that his guns might be turned on to enemy groups.

At 1300 I received a message by despatch rider from O.C., L.A.M. Brigade (timed 0915) to the effect that he had his cars some 4½ miles to my south-west which were engaging attacking Turks with their fire whenever possible.

The situation at this time was briefly as follows :—

1. **TURKS.**—(a) Small bodies (300—400) advancing extended to occupy high ground to the south of the Wadi Muabbah and opposite my original portion of line.

(b) Large bodies (2,500—3,000) moving north past my right with the intention of either escaping north or turning my right.

(c) Northern detachment (400—500) making very slow progress, but progressing nevertheless, in a southerly direction about CZ 56 central.

(d) Guns (24) still maintaining their activity.

2. **OURSELVES.**—(a) The whole of the 11th Cavalry Brigade (less 6 troops) in occupation of our original line plus right flank now refused to about CZ 74 central.

(b) 6 Troops, 7th Hussars and 2 L. A. M. cars facing enemy, northern detachment.

(c) “W” Battery and Sanders’ guns in their original positions engaging every target presenting itself.

(d) Sanders’ leading battalion (1/7th Gurkhas) still *en route*.

(e) No sign of Norton on left bank.

(f) No definite news of 17th Division but presumably south of Sherqat.

(g) L. A. M. Brigade operating about $4\frac{1}{2}$ miles to my south-west of west. Under the circumstances I felt justified in asking Sanders to send me a field battery and another infantry battalion ; the latter to enable me to set free a mobile reserve.

I asked for these accordingly at 1315, the battery to be sent to the ford to cross, the infantry to the ferry.

At 1320 I sent the situation to O. C., L. A. M. Brigade and asked him to do his utmost to delay enemy outflanking movement and prevent his escape to north.

At 1330 a Ford van convoy with rations and Sanders’ pontoons arrived at the ferry (left bank).

The latter were most welcome as up to date all ferrying work, including the transportation of the infantry from left to right bank, had been done on one raft and a small captured boat.

At 1400 the leading company of the 1/7th Gurkhas arrived and immediately relieved 2 squadrons of the Guides.

(*Note*.—The Guides were still holding my original line facing south).

These squadrons were sent off at once to reinforce the 7th Hussars who asked for help to meet an attack against their front which appeared to be imminent.

At this period the enemy guns were particularly active especially against my refused flank which lent itself to being enfiladed.

I therefore, asked Sanders at 1415 to engage them.

At 1430 I received a message by aeroplane from First Corps (timed 1325) telling me that Norton would act under my instructions on arrival.

At 1445 the remainder of the 1/7th Gurkhas arrived and relieved the remaining two squadrons of the Guides which went into reserve.

At 1450 I despatched a message by despatch rider to catch Norton on the way up, asking him to send his brigade straight to the ford on arrival and to come himself to see me at Huwaih Ruins.

At 1600 I received a message from the 7th Hussars (timed 1530) to effect that though enemy in strength had worked forward towards him to within 300 yards, expected attack had not materialized.

At 1615 Norton reached my headquarters and his brigade was seen to have arrived at the ford and to have started crossing.

At 1620 I reported the situation to First Corps (repeating to 17th Division and Sanders) to effect that enemy had failed to break through me direct—that since 1100 the bulk of their forces opposed to me, supported by field guns and howitzers, had been moving to outflank me—that I had to throw back my right in consequence—that I had been able to harass enemy's advance continuously with my guns and machine guns but that enemy's guns had been active enfilading my thrown back right flank—that enemy, northern detachment had been held in check all day—that Norton had just reported personally and that his brigade was at the ford.

After explaining the situation in detail to Norton. I asked him

(a) to arrange to picquet the enemy's northern detachment for the night and to extend my line towards Jirnaf—bulk of his brigade being kept in reserve on my extreme right and (b) to be prepared first

thing next morning to dispose of the above enemy detachment and then co-operate on my right flank according to circumstances.

At 1715 the remaining two squadrons of the Guides were sent off to relieve the 7th Hussars who came into reserve.

At 1725 a message was sent to O. C., L. A. M. Brigade, giving him a brief summary of the situation—the rôle assigned to the 7th Cavalry Brigade and his orders, *viz.*—to assist next day in preventing Turks from breaking through to the north.

The enemy in the meantime had ceased to move in a northerly direction and were now facing me practically all along my front with their right on the bluff near the river, to the south-east of Huwaish, and their left about CZ 74 c 5/10. Both sides had been actively engaged with their rifles and machine-guns for some time and this continued throughout the night while our respective guns still remained most active.

At 1900 I received news of the 17th Division through Sanders to the effect that they had carried enemy first line of trenches, south of Sherqat at 1315 and the second line at 1400 and that they were pursuing towards Sherqat.

At 1915 I asked Sanders to inform First Corps and 17th Division that I should be holding following line at daybreak next morning :—From Tigris, astride Mosul Road at Huwaish, through CZ 74 central, thence refused towards Jirnaf.

At 2005 I reported to First Corps, repeating to 17th Division and to Sanders, giving situation at dusk as indicated above and Norton's instructions. Also that I was expecting another battalion of infantry from left bank as a reserve on my left flank. That I should continue to carry out rôle of preventing enemy escape to north to-morrow and that I presumed 17th Division would continue to press on.

At 2255 I received a wireless message from First Corps to the effect that the 17th Division had been ordered to reach me by 0700 the next day.

At 0130 on the 29th, a message from Sanders received to the effect that 1/39th Garhwalis had been sent to ferry to reinforce me and asking if I should like the 1/3rd Gurkhas and another battery as well.

Replied at 0145 that I should like this extra battalion and battery warned to be ready to join me.

At 0320 Norton reported (timed 0220) that about 400 Turks including 300 wounded in ambulances had surrendered to the 13th Lancers on the right of the line.

(*Note*.—The above number was an exaggeration—actual numbers being 109).

1/39th Garhwalis plus a section of 238th M. G. Company reached ferry at 0430 and the C. O. reported to me at Huwaish Ruins, coming on ahead.

During the night the enemy displayed much activity all along my line. The brunt of it was borne by the Guides on my left centre and the 1/7th Gurkhas on my left, both with marked staunchness.

At 0530 horses were saddled up ready to move.

At 0600 the following situation report was sent to First Corps and repeated 17th Division and Sanders :—

Situation 0515.—Activity along my whole front during night—no effort on part of enemy to break through our line—400 prisoners, majority wounded, and with an ambulance reported captured—seems probable some Turks have already passed north moving west of our line while others face us and more may be following from the direction of Sherqat with 17th Division on their heels. Norton who crossed ford with bulk of his brigade, less guns last night, has orders to move as soon as possible north and north-west with the object of rounding up any Turks who may have passed north and intercepting those that may follow. I shall co-operate as circumstances dictate with 17th Division to same end.

The distribution of the troops under my command and dispositions of the enemy at 0600 are as shewn on Map B.

At 0605 Norton reported to me personally. After discussing the situation a copy of his instructions (already despatched to him at 0545) was given to him. The gist of these has been indicated above.

At 0630 I received a report that the right of our line was being shelled from the north-west (presumably by Turkish northern detachment).

At 0700 the leading two companies of the 1139th Garhwalis arrived with O. C., who reported that the remainder of his battalion were coming shortly. Orders were given him to relieve the 23rd Cavalry and Guides as soon as possible, these 2 regiments on relief to join the 7th Hussars in reserve.

At 0730 large numbers of troops could clearly be seen from the Huwaisi Ruins some 3 to 4 miles to the south, but nothing showed between the above and Huwaisi.

In view of orders issued to 17th Division overnight it was thought that the above troops might be the 17th Division but in this case what had happened to the Turks? I felt confident that the bulk of the Turks had not escaped to the north although it was possible that small parties may have slipped past.

To be on the safe side however I sent Norton the above information at once and warned him to be ready to move off north in case of necessity and told him in the event of this necessity arising, that I would follow with my brigade as soon as I could.

At 0755 I received a report that A/337 Battery (sent by Sanders) had started to cross ford. I sent it orders to join Norton after crossing.

At 0800 I received an aeroplane message to effect that the most advanced troops of the 17th Division were at about CS 2 b 9/5 but that there might be some already in position as far north as CZ 92 d.

The above information rather confirmed what had been observed earlier, but was not convincing.

So I asked the aeroplane :—

- (a) To locate the nearest enemy troops to the south.
- (b) To reconnoitre 15 miles to the north and north-west.

Meanwhile at 0840 Norton reported that he was advancing, under cover of his guns, to seize the high ground to his north-west.

At 0850 C/337th Battery (sent by Sanders) arrived at ford and received orders to join Norton also after crossing.

At 0855 I received from the aeroplane the answers to my questions.

These amounted to the following :—

- (a) Nothing observed of any importance to north and north-west.
- (b) That nearest enemy to me were those actually facing me all along my line (*vide* map B).

I now asked the aeroplane to reconnoitre 15 miles to the west.

At 0945 a message giving the situation at 0930 was sent to First Corps and repeated to 17th Division and Sanders. The 3 main points mentioned were :—

- (a) That according to aeroplane the 17th Division were some 2 miles to the south of Huwaisi.

(b) That aeroplane reports nothing of importance for 15 miles north or north-west.

(c) That I could get no definite information regarding the whereabouts of the bulk of the enemy.

Had they surrendered to the 17th Division ?

At 1000 aeroplane reported that there was no sign of any troops for 10 miles to the west and that the 17th Division still appeared to be where previously reported (see message above received at 0800).

In spite of this persistence with regard to the 17th Division, I now decided in view of the fact that no movements could be observed north and north-west or west that the troops 2-3 miles south of Huwaish were the main Turkish army and not the 17th Division. Norton was at once informed accordingly and told to carry on preparatory to swinging south in order to close all avenues of escape to the north and north-west.

At 1030 Norton reported (timed 1000) that he was held up about CZ 65 c by heavy machine gun fire—that he was engaged in clearing hills with his guns—A/337 being in action on right bank and “V” Battery on the left bank.

A reply was sent at once that he could keep A3/37th Battery but that C/337th Battery should be sent to me as soon as possible (*vide* message timed 0850 above).

At 1100 aeroplane reported :—

(a) 3 of our L. A. M. cars about DF 81 b.

(b) 2 guns and a small body of men about DG 18 c (detachment from 17th Division).

(c) One battery at CS 11 b with 17th Division and Infantry Brigade (presumably H. Q. of these formations ?)

(d). Enemy appears to be holding line CZ 92 d 8/2 to CZ 91 central.

The above confirmed the conclusion arrived at earlier (1000).

At 1110 I gave Sanders the above information, also that there was no indication of the Turks having escaped north, and told him that my guns had been turned on to the enemy, on line CZ 92 d 8/2—CZ 91 central, and asked for his guns to co-operate. At 1130 the O. C., C/337 reported to me. He was ordered to get his battery into action alongside the 2 guns of “W” Battery in the plain to the north east of Huwaish.

At 1145 I asked Norton how he was getting on with the detachment against which he was engaged and told him to sweep south as soon as possible.

At 1205, I got a reply to my 1110 message from Sanders in which he stated that his guns were being turned on to the Turks as requested—that he was pushing infantry and machine guns to river bank at CZ 93 d and asking me if I wanted the 1/3 Gurkhas.

I replied at 1240 that I should like the 1/3 Gurkhas.

At the same time I received a message from Norton (timed 1135) that he was still held up and that enemy opposed to him had commenced to advance south.

At 1245, however, I received a later message to the effect that he was pushing back enemy as rapidly as possible and that his sweep to south had commenced.

At 1315 following situation report was sent to First Corps and repeated to 17th Division and Sanders:—

Situation 1300.—Norton reports starting his sweep south—no signs of 17th Division—activity along my whole front continues.

(*Note.*—It is noteworthy that the enemy's guns which had been so active against us from the south on the 28th and the earlier part of the night 28/29th remained absolutely silent during the latter portion of the night 28/29th, and the whole of the 29th. They had presumably got through their ammunition or been switched off on to the 17th Division—I think the former from what I learnt afterwards).

At 1452 message received from Headquarters, 18th Division (now opposite Sherqat on left bank) that 17th Division were going to attack CZ 92 d—CZ 91 central at zero hour, not before 1530, and asked if I was in direct communication with 17th Division.

At 1455, Norton reported that he had disposed of the enemy detachment opposed to him, and taken prisoners estimated over 1,000, and that he was now engaged in taking up a position facing south through CZ 65 central.

(*Note.*—Captures actually numbered 985 with 12 machine guns and 2 camel guns).

This final disposal of the enemy's northern detachment and the clearance of my right was most welcome news, especially as its

strength, according to reports received up to date, had been considerably underestimated.

(I am unaware of the details of this action but I understand that the 13th Hussars and "V" Battery took the most conspicuous part).

The above information was sent to First Corps and repeated to 17th Division and Sanders at 1500.

At 1503 a bombardment was heard to the south, presumably against the Turks on the line CZ 92 d—CZ 91 central.

"W" and C/337 were ordered to take part.

At 1505, Norton was warned to maintain the most forward line reached by him at dusk, throughout the night.

At 1513, 18th Division message received to effect that bombardment of enemy's line (already referred to) would last from 1500 to 1530 when the 17th Division would go in.

Meanwhile an aeroplane came over and on being asked certain questions I received the following reply at 1530:—

17th Division advanced

line at ..CS 3 a 3/3—CS 2 a 5/3—CS 1 b 9/9.

Enemy facing 17th Division

on line ..CS 3 a 3/5—CS 2 a 7/7—CZ 92 c 5/5.

Enemy facing me

..As before.

Norton ..

..Headquarters at Cemetery (S. W. of Hadranayah).

Brigade moving W. S. W. in square CZ 74 a.

At 1550, I sent above information to O. C., L. A. M. Brigade adding that the only possible exit left open to the Turks was to the west and ordered him to close this about DF 90 central.

At 1620, aeroplane reported situation of enemy's troops to be unchanged and that 17th Division were bombarding enemy's position opposite to them.

At 1705, I reported to the 18th Division (in answer to their 2 messages) that I was not in communication with 17th Division and could not be until Turks between us had been disposed of, that I had taken part in the 1500 bombardment and that 2 Véry lights had just

been observed on the west flank of position attacked by 17th Division which might mean that the 17th Division had gained their objective.

(*Note*—I found out much later that these Vêry lights were used as a signal by the Turks to counter-attack the 17th Division !)

At 1715 the 1/3 Gurkhas arrived and went into reserve behind my left centre.

At 1845 following situation report was sent to First Corps, 17th Division and Sanders :—

Situation 1800.—No change opposite my position which is now held by 3 battalions with machine guns lent by Sanders—Norton blocks avenue of escape north and north-west on line running approximately CZ 74 central in south-westerly direction—have co-operated with my guns during 17th Division activities this afternoon especially watching line of escape to west—during night have arranged to be very active against enemy facing me and to intermittently plaster area round CZ 82 central with my guns throughout night and shall be prepared to co-operate in finally disposing of the enemy from dawn to-morrow onwards according to situation—let me know 17th Division situation and intention.

(*Note*.—The situation at 1800 is shewn on Map C).

At 1915 O. C., L. A. M. Brigade reported to me personally and received instructions to be about DF 90 central, *i.e.*, on the west of the Turks at dawn next morning.

All prisoners and casualties were evacuated during the day to the ferry.

At 2030, I sent Norton brief summary of situation and my intention during the night and asked him to co-operate with his guns and be prepared to move at 0545 next morning, continuing his sweep south and south-west.

At 2200, I received a message from Norton (which had crossed the above) giving me his approximate line and telling me that in the event of enemy attempting to escape round his right flank during the night he proposed to pursue at dawn—that he was short of gun ammunition and did not intend to fire his guns during night unless urgently necessary.

At the same time I received First Corps message (timed 1914) to effect that 17th Division attack had not been completely successful—

that situation would not be clear till morning—that 17th Division would hold ground gained and hoped to complete defeat of Turks next day but that they did not hope to gain any more ground during the night.

At 2240 reply was sent to Norton that if he had definite information at dawn of enemy movement past his right flank he should pursue as suggested but that he should be careful not to be led away on a false trail—that the L.A.M. Brigade had been ordered to co-operate next day in his drive to the south, on his outer flank—that he should send to ferry for gun ammunition.

At 0315 on the 30th, First Corps message (timed 2315 on 29th October) was received to effect that 17th Division could not resume offensive until the afternoon, 30th October and that they were arranging to form a series of posts on the left of the Turks to prevent their escape to the west during night—that my orders for 30th were to continue to bar enemy's retreat to the north and north-west and to mop up any parties which may have escaped during night. The above information was passed to Norton at 0440 and the importance of his previous instructions regarding the continuance of his sweep to the south and south-west on 30th were again emphasized.

The night passed much more quietly although there was intermittent firing throughout—my guns as arranged plastered the ground between CZ 82 central and CZ 91 central.

In view of First Corps message (received at 0315 above) my general intention this morning was (a) to roll up the Turks facing me by attacking their left in flank from the north with the 1/3 Gurkhas while Norton continued his sweep to the south behind them and (b) to subsequently fall on the rear of the Turks opposing the 17th Division further south.

At 0630 just as this operation was starting white flags were observed to the south and it became obvious soon afterwards that the Turks facing me at any rate intended surrendering.

At 0655 a genera' advance by infantry to the line CZ 93—CZ 92 was ordered, with 11th Cavalry Brigade in reserve.

At 0715 the above information was sent to Norton and he was ordered to advance south at once on line CZ 73—CZ 82.

At 0720 the following message was sent to First Corps and repeated to 17th Division and Sanders :—Turks facing me have just surrendered. My infantry advancing on line CZ 93 central—CZ 92 central.

Norton ordered to move south on line CZ 73 central—CZ 82 central. My intention throughout the day is to press Turks facing 17th Division as far as I can.

At 0815 I received an aeroplane message to effect that Turks opposite 17th Division had surrendered.

Arrangements were now made for the infantry and 11th Cavalry Brigade to collect prisoners, material, etc., south of line CZ 84 central—DF 89 central and up to the 17th Division while Norton was instructed at 0900 to “Mop up” north of above line, going at least 10 miles west and north-west and 15 miles north, using the L.A.M. Brigade to help him if he could get into touch with him.

The situation was also sent to the L. A. M. Brigade at 0930 with orders to join in in the “Mop up” to the north.

At 1030 I received a message from the L. A. M. Brigade which had been repeated to Norton to the effect that 4 cars were engaged in pursuing a small party of enemy cavalry to the west of Qaiyarah and that a party of Turks was stationary about CZ 31 c.

As the dealing with this latter party came within the scope of Norton's instructions I left it to him.

At 1240 a further report was received from the L.A.M. Brigade to the effect that 25 Turkish Cavalry had been captured near Shura (15 miles north of Qaiyarah)—that Turks previously reported at CZ 31 c had moved north and numbered about 300—500.

At 1300 the above information was sent to Norton with instructions to co-operate vigorously with L.A.M. Brigade to round up the above and occupy Qaiyarah.

A copy of above was also sent to the L. A. M. Brigade.

A report regarding action taken with regard to the above was sent to First Corps at 1355 and repeated to 18th Division. Meanwhile the collection of prisoners, etc., proceeded.

By dusk over 3,500 prisoners had been sent back to the ferry. The 11th Cavalry Brigade and attached 18th Division troops bivouaced at the ferry (right bank) for the night.

At 1900 I received a message from the L.A.M. Brigade to the effect that the force of Turks previously reported moving to Qaiyarah had been captured and that Qaiyarah had been occupied. The above information was sent at once to First Corps, 18th Division and 17th

Division—with the remark that I had no news of Norton but would report further details on hearing from him.

(*Note.*—I got Norton's report at 1200 next day giving the following details regarding the capture at Qaiyarah on 30th :—1,000, prisoners, 10 machine guns, 1 camel gun, much material, including paddle steamer, and a large convoy).

He also stated that the mensil at Qaiyarah contained supplies especially atta, grain and dry vegetables.

PART III.

OPERATIONS FROM 31ST OCTOBER TO 3RD NOVEMBER.

October 31st.

(At 2100 the previous day I had received First Corps operation order 3 (G. 894 timed 1600) to the effect that a mixed force which included the 7th and 11th Cavalry Brigades and L.A.M. Brigade was to be formed at once under the command of Major-General Fanshawe to capture Mosul).

At 0005 on the 31st, First Corps message (G. 913 timed 2235) was received modifying previous orders as follows :—

- (a) Force consisting of 7th and 11th Cavalry Brigades and L.A.M. Brigade was now placed under my orders.
- (b) I was to move as early as I considered advisable in order to carry out mission assigned to General Fanshawe, *viz* :—capture of Mosul.
- (c) That I was to live on the country.
- (d) That remainder of Fanshawe's column, as under, would leave Qaiyarah afternoon, 2nd November in support :—
1 infantry brigade, 1 battery 18 pdrs, 1 section 60 pdrs.,
and 1 squadron cavalry.

At 0045 I sent by hand of an officer gist of above to Norton and instructed him to remain concentrated at Qaiyarah where I should join him at 1700 today with 11th Cavalry Brigade, portion of L.A.M. Brigade not already with him and portion of his own brigade left behind with 2 days rations.

The next 12 hours was spent in getting urgent necessities for the 2 brigades across the river by the ferry which at this period was more than congested, and in making arrangements for the forthcoming move to Mosul.

At 1200 I received Norton's message giving me details of his captures at Qaiyarah on the 30th which has already been referred to above.

This information was wired to First Corps and Fanshawe's Column at 1245.

The 11th Cavalry Brigade (with portion of 7th Cavalry Brigade and 2nd line L.A.M. Brigade) left the ferry at 1300 and reached Qaiyarah at 1700 to find the 7th Cavalry Brigade and L.A.M. Brigade and A/337 Battery (which had accompanied Norton on 30th) in bivouac at that place.

The news I had at that time of the enemy ahead of us was approximately as follows :—

At Mosul	..	{	1 Regt. 5th Division	..	{	800 rifles.
						70 sabres.
						20 guns.
	..	{	Mosul garrison	..	{	850 rifles.
						100 sabres.
						12 guns.
<i>En route to Mosul from Altun Kupri</i>		{		..	{	1,500 rifles.
						130 sabres.
						12 guns.

At 1800 a L.A.M. Brigade reconnaissance which had been pushed forward 20 miles beyond Qaiyarah returned and reported all clear.

1st November.

(*Note.*—References are to map D). My force moved to Hammam Ali on the 1st November preceded by a L.A.M. Brigade reconnaissance as far as that place which reported in due course that all was clear.

At 1045 I met Lt.-Colonel Leachman (who had gone forward in the first place with the L.A.M. Brigade reconnaissance) a few miles downstream of Hammam Ali with 2 Turkish officers who had a letter for the G. O. C.-in-C. regarding armistice negotiations. I instructed Leachman to proceed to the ferry at Hadraniyah and report to Fanshawe taking the 2 Turkish officers and the letter with him.

At 1430 I was handed First Corps message (G. 978 of 1st November 1918) which had been dropped by aeroplane to the effect that an armistice with the Turks had been signed at 1200 on the 31st October and that hostilities were to cease.

By this time my force was just getting into their respective bivouacs at Hammam Ali.

At 1500 I received a letter from the 5th Turkish Divisional Commander requesting me to return to Qaiyarah. I immediately went forward in a car to see him and found him some 5 miles south of Mosul. I explained that as I had only just heard of the armistice and as my force had already reached Hammam Ali, I declined to go back to Qaiyarah.

In going forward to see this commander I noticed that the Turks (estimated at 1 regiment of infantry with machine guns and camel guns) were in position astride the road at Lazzaka.

On getting back to Hammam Ali at 1800 I reported the above to First Corps and Fanshawe adding that I did not see my way to advancing on Mosul without fighting, if that was still the immediate intention.

At 2030 Leachman rejoined and handed me instructions from Fanshawe to effect that I was to remain at Hammam Ali until receipt of further orders and that Leachman was to proceed to Mosul to interview Ali Ihsan, the commander of the 6th Turkish Army, reporting result as soon as possible.

At 2330 I received G. H. Q. orders (X 3537 of 1st November 1918) directing me to push on to Mosul in the interests of law and order.

I assumed the above to be my final orders but feeling sure that my message, giving the situation during the afternoon and sent at 1800, had not been received prior to their issue I asked for confirmation at 0135 on the 2nd November.

2nd November.

I received the latter from G. H. Q. at 0945 with a modification which indicated that the location of our troops near Mosul was only required.

In the meantime I had despatched (at 0630) Leachman to Mosul with a letter to Ali Ihsan in which I informed him that my orders were to advance and to occupy Mosul—that I intended to move at 1200 to-day—that I hoped to avoid all conflict with his troops in my advance to prevent further unnecessary loss of life—and that I requested him to withdraw his troops at least 5 miles clear of Mosul leaving only sufficient guards in town to prevent Arab disorder until they could be relieved. Leachman returned at 1150 and informed

me that though Ali Ihsan had no intention of evacuating Mosul he did not intend to fight and had no objection to my advancing to the hills commanding Mosul on the south, which he would evacuate.

His idea was to establish a neutral zone between us with his troops on a line about $1\frac{1}{2}$ miles to the south of Mosul while my troops remained on a line on the high ground some 4 to 5 miles further south.

Though this was a step in the right direction I did not consider that I should thus be near enough Mosul to carry out my instructions.

Leaving orders for my force to advance to the position above indicated I set out at 1200 to interview Ali Ihsan.

On returning at 1645 to Abu Sif I found that our line had been occupied and the troops in bivouac.

The following message, which was despatched at 1830 to G. H. Q., First Corps and Fanshawe, sufficiently indicates the result of my interview :—1700. Have just returned after concluding, with Ali Ihsan, an arrangement which under circumstances prevailing this morning is satisfactory from every point of view. I am to advance to a line mutually agreed upon within about 2 miles of Mosul which Turks will continue to occupy for the present giving us every facility towards ensuring maintenance of law and order which at present is quite satisfactory. In addition have made preliminary arrangements for purchase from Turks direct of supplies to meet our requirements as far as available. To-night I hold hills commanding Mosul and plain in which it lies and will take up forward line tomorrow. Interview throughout most friendly.

Meanwhile, however, I received a message from G. H. Q. (X. 3551 of 2nd November 1918) to the effect that Mosul was to be occupied in accordance with Clause 7 of the Armistice Terms (a copy of which I received very shortly afterwards by aeroplane) and attention was drawn to clause 16 which ordered the surrender of all garrisons in Mesopotamia to the nearest Allied Commander. During the night, the necessary orders for the advance on Mosul next day, and for its occupation tactically, were issued. Details for the actual occupation of the town itself were also worked out.

November 3rd.

Leaving instructions for my force to move at 0800, I went on ahead in a car to see Ali Ihsan again, in view of the change in the situation since I last saw him, leaving camp at 0630.

The result of this interview and action taken is summarised in the following message despatched at 1200 to G. H. Q., First Corps and Fanshawe :—

1200. Am now at Mosul with my headquarters at German Consulate. My troops occupy tactical points surrounding city and all main approaches to it. Details regarding my interview with Ali Ihsan Pasha being sent by despatch rider to Fanshawe. Foresee delay in literally complying with clauses 7 and 16 of Armistice Terms, which Ali Ihsan has not yet received, but as relations with him are perfectly friendly and I have complete trust in him there seems to be no reason for undue haste. Law and order in the city most satisfactory.

At 1315 I sent a further message to Fanshawe bringing out the following additional points :—

(a) That Ali Ihsan had received no orders regarding our occupation of Mosul nor as regards surrender—in fact his latest orders were not to do either.

(b) That since commencement of Armistice he had not attempted to evacuate troops or war material—on the other hand those evacuated prior to the news of the Armistice being received had been recalled.

(c) That he had promised to make no withdrawals of any description either from Mosul or the area which he commands.

(d) That I proposed at present to leave him to freely administer Mosul and his troops as regards maintenance while commanding the area tactically myself.

(e) That he had given me facilities to inspect his area with view to subsequent taking over and had undertaken to provide supplies on payment at once, the same to be adjusted later.

(f) That supply situation generally promised to be highly satisfactory.

At 1330 the Corps Commander arrived by aeroplane and shortly after interviewed Ali Ihsan presenting him with the G.-O.-C.-in-C.'s reply to his letter of the 1st of November, which made it quite clear that clauses 7 to 16 of the Armistice terms were to be complied with.

At this interview Ali Ihsan raised many points, all of which amounted to the one main thing, *viz.*, that he had received no orders from his government and did not see his way to a settlement until he did.

The Corps Commander left by aeroplane at 1545.

At 1830 Ali Ihsan came over to see me and made the following points :—

(a) That he had just received the terms of the armistice from his Government.

(b) That he must receive definite orders from his Government that Mosul is included under clause 7 of the terms.

(c) That clauses 5 and 20 of the terms (*viz.*, demobilization) were applicable to him and not clause 16 (*viz.*, surrender) in that he held his force to be a Field Army and not a garrison. He added as an argument in favour of this that clause 16 had not been applied, according to his information, to the 7th Turkish Army in Palestine.

The gist of above was sent to G. H. Q., First Corps and Fanshawe at 2030.

Shortly after I received a copy of G. H. Q. message (X 3591 of 3rd November 1918) to effect that G. O. C.-in-C. agreed that there was no need for undue haste in making the Turks comply with the terms of armistice of which they were apparently ignorant—that War Office had been asked to have full details sent to Turks especially as regards clauses 7 and 16.

General Fanshawe arrived early in morning of 4th November and took over from me—the situation then being as briefly recorded above.

PART IV.

MISCELLANEOUS NOTES.

TAOTICAL.

The chief points to be noted from the operations as far as cavalry is concerned are—

(1) Cavalry has still its own particular uses in war—in fact the answer to the question “Who has heard of a war without a horse?” must still remain unchallenged.

(2) In the attack—the object can best be attained by using mobility to effect surprise, while making full use of ground and by striking suddenly against the flank of the objective under the supporting fire of as many guns and machine guns as are or can be made available.

This means that the fullest use must be made of the horses or, in other words, in the attack, use cavalry as cavalry, and not as infantry.

(*Note.*—Four examples to illustrate the above took place during the operations, viz. :—

(a) Crossing of Lesser Zab at Zrariya on 24th October by 7th Hussars.

(b) Attack on enemy's position south of Huwaish on 27th October by 23rd Cavalry.

(c) Counter against enemy's left south of Huwaish on 28th October by 7th Hussars. †

(d) Attack on position held by enemy's northern detachment south-west of Hadraniyah on the 29th October by 13th Hussars.)

(3) In the defence—A naturally strong position and a judicious selection of strong points along it, will enable a regiment of cavalry to hold up an ordinary attack on a surprisingly wide front, as was exemplified at Huwaish on the 28th and 29th October. This is largely due to the increase of fire power which 16 Hotchkiss guns has given to a regiment.

(4) The Hotchkiss gun may be said to have increased the fighting power of cavalry (both in attack and defence) by at least 75 per cent.

(5) It should be recognised that in the attack (especially if carried out as in (2) above) casualties amongst animals are bound to be high and it may also happen in consequence that the price to be paid for loss of arms and equipment (carried on horses) is high also. Casualties amongst men should not be higher at any rate than if the attack was carried out dismounted.

(6) The importance of personal reconnaissance by the commander of any cavalry force before he commits himself to an undertaking cannot be too strongly emphasized—and as this decision has usually to be made quickly, it follows that his place should always be “well forward.”

CONTACT AEROPLANES.

The following points were brought out during the operations and may prove of use hereafter :—

(1) It is essential for a cavalry brigade which has been given an independent mission to perform, to have some (a flight if possible) of contact planes allotted to it. This should be done some time prior to operations commencing so that previous practice can be carried out.

(2) Before the operations commenced important topographical reconnaissances of unknown country were made as follows :—

A certain area was reconnoitred by a plane and result noted on the map.

Next day this was verified by motor car reconnaissance—the previous air reconnaissance in most cases proved most accurate, and was, of course, in any case, invaluable for the rapid carrying out of the latter.

(3) The Popham Panel proved most useful and easy to work. On the move it was carried by a motor cyclist despatch rider who was always accompanied by another, to help in working it when required.

(4) The Popham Panel Code needs supplementing by the following questions, etc. :—

Confirm your last report.

Give situation round me locating all our and enemy troops.

Spot for my guns.

Can you locate enemy guns ?

(5) The location of brigade headquarters practically in the firing line, even if otherwise suitable, is not favourable from a contact aeroplane's point of view—as the aeroplane draws enemy fire on to itself whenever it flies over to drop a message.

(6) The reasons against asking a contact aeroplane to land are obvious but if a commander takes it upon himself to signal this order, there should be no question about complying with it.

(7) When wireless is the only other means of communication the value of receiving important orders, etc., by aeroplane cannot be sufficiently emphasized.

(8) In giving the location of our own troops aeroplanes should invariably state if the Popham Panels of these formations were observed.

COMMUNICATIONS.

(a) Motor cyclists again proved themselves invaluable. By taking 6 motor cycles from the machine gun squadron (in exchange for horses) and training extra men in the Signal Troop to ride them, this extra number of despatch riders was employed.

(b) During the Huwaish operations (26th to 30th October) visual signalling by night was much used. The electric lamps at present issued proved most unreliable. It is strongly recommended that Lucas lamps be issued instead, packed in two leather cases—the lamp in one the battery in another—to facilitate carriage.

(c) Electric torches are of no use as they cannot be depended upon.

(d) The pack wireless with the brigade was continually getting out of order and was due no doubt to the shaking the machine got during movement. Present packs are also much too heavy for animals to carry on a long march which has to be carried out rapidly.

The solution appears to be as follows:—

Pack sets for use with cavalry should be carried in Ford vans and be transferred to pack horses only when necessary. Though this would mean having both Ford vans and pack horses on the establishment of a pack wireless section it would be more economical in the long run.

ARTILLERY.

(a) Number of rounds fired totalled 2,800 as follows:—

At crossing of Lesser Zab, 24th October	.. 120
Huwaish, 27th and night 27/28th October	.. 680
Huwaish, 28th and night 28/29th October	.. 1,500
Huwaish, 29th and night 29/30th October	.. 500
	<hr/> 2,800

(b) Ammunition Supply. Owing to influenza the battery left Sheikh Habib with firing battery only, that is 100 rounds of ammunition per gun, instead of 176.

The ammunition column carried 200 rounds per gun, total 300 rounds per gun. All this ammunition crossed the Tigris at Huwaish to right bank.

During the fight the guns never had to slacken or stop firing through lack of ammunition, although at times the supply was running short.

The battery ammunition column replenished from the ferry, right bank, where ammunition from the 18th Division was ferried across on rafts.

The six 18 Pr. ammunition wagons of the column acted as First Line wagons to the battery.

(c) Carriage of 18 Pr. gun ammunition by the Battery Ammunition column.

1,200 rounds are carried in the ammunition column—of these 456 rounds are in six ammunition wagons (artillery) and 744 rounds in caissons and L. G. S. wagons. The latter (744) rounds are packed in wooden boxes (4 rounds per box) which are very liable to fall to pieces even at the trot over good roads, causing the shells to roll about loose thus denting the brass cartridge cases and often causing the latter to become detached from the shell.

After marching from Sheikh Habib to Samarra, 30 per cent. of the gun ammunition had become unserviceable owing to the above causes and had to be exchanged. There was also a case of 1 round H. E. exploding which disposed of 4 boxes of ammunition and rendered the caisson unserviceable and killed a horse.

Various extra precautions were taken to prevent ammunition boxes breaking (*e.g.*, extra wire was bound round them and sacks were wedged in between boxes to prevent them moving) but these had little effect.

For quick travelling over bad going, extra strong boxes appear essential. The alternative is to carry all gun ammunition in ammunition wagons (artillery) instead of in caissons and L. G. S. wagons.

(d) Co-operation with aeroplane.—Though previous arrangements had been made, the battery was only called up once by the aeroplane during the operations, *viz.*, At the crossing of the Zab on the afternoon of the 24th October, when the shoot was quite successful. The

aeroplane had no wireless and the shoot was done by means of Vêry lights and Klaxon horn.

During the operations at Huwaish (27th to 29th October) the battery had an excellent observation post and although aeroplane observation was not essential, it would have been invaluable especially on the 27th and 29th.

Ground strips were exposed behind the guns throughout this period.

(e) No. 9 Ross periscope was used during the 28th and 29th October at the observation post at Huwaish—this was essential on account of enemy rifle and machine gun fire which made the spot somewhat “unhealthy.” It proved a most useful instrument and gave good magnification and field of view.

(f) Telephonic communications.—These were lengthy owing to a detached section of guns and were only cut or broken 6 times (quickly repaired) during the period 27th to 29th October. The telephones proved most useful.

(g) Horsing of G. S. wagons (2) with battery.—As these wagons move with “A” Echelon and therefore at not more than 4 miles an hour normally, L. D. mules would be more suitable for them than L. D. horses, especially as they carry heavy loads. The inclusion of 12 L. D. mules *vice* 12 L. D. horses in the establishment of a battery is therefore recommended.

FORDS AND FERRIES.

(a) Fords.—Two points were emphasized during the operations with regard to the fords used at the Zab and Tigris, *viz.* :—

(1) the necessity for clearly marking the fords, (2) the necessity for impressing on all ranks that when crossing a deep ford each man ought to take his own line and to keep his horses head upstream so that they cross in echelon, as it were, behind the other and to not follow head to tail.

(b) Ferries.—The ferrying done both at the Lesser Zab and the Tigris proved how extraordinarily well the light bridging equipment in possession of the field troop has been designed for its purpose. Its main advantages are that—

(1) It is portable enough, with teams of eight good horses in each wagon to be able to keep up with the “A” Echelon transport.

(2) It is very quickly erected.

At the Huwaish Ferry the first load of motor cycles was ferried across within $1\frac{1}{2}$ hours of selecting the site, in spite of some heavy ramping being required to get the wagons to the waters edge.

(3) It is very quick to work owing to (1) the ease with which the loading span and the trestles can be put down and taken up. At the Lesser Zab six motor cars were ferried over 70 yards of river in 35 minutes : (2) the ease with which the raft can be rowed in comparison with a G. S. pontoon raft. At the Huwaish Ferry, which was about 300 yards wide, with a current of about 2 miles per hour, it was found that the former raft could do about $2\frac{1}{2}$ trips to 1 by the latter.

(4) The raft can take very big loads in comparison with any form of collapsible boat or temporary raft. It will easily take an 18 Pr. gun and loaded limber at one time. Some very heavy loads were ferried across at Huwaish, *e.g.*, 46 men including a crew of 7 and 39 Turkish prisoners with all their equipment. This must have totalled 9,000 lbs.

The retention of this equipment with the Field Troop of the brigade has been clearly justified.

VETERINARY.

(a) This report embraces the operations of 11th Cavalry Brigade from 6th October 1918 to 3rd November 1918, both dates inclusive.

(b) The brigade marched from Sheikh Habib on 6th October and arrived at Tekrit, left bank on 22nd October. There was a halt for one day at Khirr camp, Baghdad, and a halt for 7 days at Al Ajik. The average distance for the 8 marching days worked out at $19\frac{1}{2}$ miles, exclusive of a short march of 6 miles to Tikrit from Aujah.

On the longer marches arrangements were made to water and feed *en route*.

A uniform pace of 5 miles per hour was maintained by the cavalry and R. H. A. The average pace of "A" Echelon transport (L. G. S. wagons) was 4 miles per hour, and of "B" Echelon (A. T. carts) about 3 miles per hour.

The distance covered, duration of marches, watering arrangements, etc., on leaving Tikrit until the arrival of the brigade at Mosul, are as shown below :—

Date.	Destination.	Distance.	Water (<i>en route</i>).
Oct. 23rd	Ain Nakhailah	... 32 miles	.. Springs south of pass 28 miles.
„ 24th	Uthmaniyat	.. 45 to 50 miles.	Garha, 16 miles. Hajal, 30 miles.
„ 25th	Towards Tigris and back (Portion of brigade).	30 miles	.. Wadi, 15 miles.
„ 26th	Huwaish <i>via</i> Hadraniyah.	35 miles	.. Downstream of Ras Ghanaus, 30 miles.
„ 27th-30th.	No marching.		
„ 31st	Qaiyarah	.. 12 miles	.. Nil.
Nov. 1st	Hammam Ali	.. 24 miles	.. Shura, 12 miles.
„ 2nd	Towards Mosul	.. 7 miles	.. Nil.
„ 3rd	1 mile south of Mosul	7 miles	.. Nil.

Notes.—(1) Time was an essential factor in the operations of 24th and 26th October, and on these dates the leading cavalry regiments moved at a rate of 6 miles per hour, for a considerable portion of the distance. With this exception, the pace throughout was as in (b) above. (2) During the long march to the Lesser Zab on the 24th, the heat was severe, the horses however showed little signs of distress. This was largely due to the fact that previous reconnaissance enabled the brigade to make straight for the water holes about Garha and Hajal. (3) During the period 27th to 30th October, the horses were put to a severe test, which, on the whole, they stood well.

As noted below, the rations during this time were at a minimum. Horses were saddled up from dawn to dusk.

Watering was irregular, only a few men could be spared, per unit, to water horses and the distance from cover to the river was from $1\frac{1}{2}$ to 2 miles and under distant machine gun and rifle fire. There was constant movement during the day which had to be carried out at a rapid pace.

(c) Rations were obtained as follows:—

October 6th—22nd	..Full grain and bhoosa on operation scale.
October 23rd—26th	..Full grain and half bhoosa.
October 27th—30th	..Half grain, about 8 lbs. of bhoosa for the 4 days and from 2 to 3 lbs. of jowari cut locally daily, as opportunity allowed.
October 31st	..Full ration of barley obtained from captured enemy supply store at Qaiyarah, and about 1 lb. of local jowari. No bhoosa.
November 1st-2nd	..Half ration of barley, carried from Qaiyarah. Full ration of bhoosa, obtained from Hammam Ali village.
November 3rd	..About 5 lbs. barley, no fodder.

(d) Sick animals were collected and evacuated, after leaving Tikrit as follows:—

At Ain Nakhailah, 3 animals were handed over to No. 4 Mobile Veterinary Section.

From Uthmaniyat, 15 animals were sent to the junction of Lesser Zab and Tigris, in charge of the Brigade Veterinary Officer. These animals were evacuated thence *via* Fathah to Tikrit under charge of a regimental Salutri.

During the operations at Huwaish, sick and wounded animals were collected near the ferry. On 3rd November, 97 of these animals were evacuated, *via* Tigris right bank, under charge of a regimental Salutri. These animals were handed over at camp AM 61d, to No. 4 Mobile Veterinary Section which had moved to this location from Ain Nakhailah.

The Brigade Veterinary Officer left the ferry on November 4th to rejoin the brigade at Mosul, leaving at the ferry some 80 minor veterinary cases. These latter animals were evacuated under orders of the D. A. D. V. S. 17th Division.

(e) Casualties as given below are approximately correct :—

1. Battle casualties—

Killed	..	..	..	110
Drowned	..	..	..	17
Missing	..	..	..	47
Total				174

2. Other casualties, died or destroyed—

Exhaustion	20
Laminitis	11
Sprained tendon	2
Total				33

Total dead wastage	..	207
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3. Evacuated—

Wounded	56
Saddle galls	100
Laminitis	40
Debility	39
Sprains	22
Injuries	..	..	..	13
Lameness, ringbone, etc.	..	..	..	4
Total				277

In addition to the above, there were 100 horses treated by the Brigade Veterinary Officer and remaining with the brigade.

Total inefficiency (less dead wastage)	..	377
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(f) General condition, on 6th November :—

Cavalry rides	.. Fairly good.
L. D. horses	.. Poor.
Pack horses	.. Very poor.
L. D. mules	.. Good.
A. T. mules	.. Very good.

(g) The need for a few trained dressers (capable also of keeping records) on the Staff of the Brigade Veterinary Officer was brought out during the operations. Owing to the rather abnormal circumstances of the operations it was often found impracticable to evacuate animals

to receiving stations at once. They had to be dumped. Dressers to look after such animals at dumps and subsequently on the march to receiving stations would have been invaluable and would have reduced the total animal wastage to an appreciable extent.

MEDICAL.

1. The advanced dressing station and a light tent division accompanied the brigade from Tikrit on 23rd October 1918, all personnel who could not be carried in wagons being dumped.

Total medical personnel taken forward was—

B. Os.	..	..	..	4
B. O. Rs.	..	..	..	5
I. O. Rs.	..	..	..	3
A. B. C.	..	..	..	13
A. H. C.	..	..	..	5

Transport :—

Ford ambulance wagons	..	3
Ford touring cars	..	2
Light horsed ambulances	..	6
L. G. S. wagons	..	8
Water carts	..	2
A. T. carts for rations	..	8

Medical Equipment of 2 Sections.

2. 25-10-18. 1 B. O., 10 B. O. Rs. and 2 I. O. Rs. sick and wounded were brought across the Lesser Zab River in the horsed ambulance wagons and evacuated down the left bank to Fathah. 7 of the above were lying cases and were sent down in the motor ambulance wagons, and the remainder in Ford lorries.

3. 26-10-18. Sick were evacuated in empty A. T. carts marching to Fathah. The advanced dressing station marched with fighting troops, and the tent division with "A" Echelon. No casualties were received. The motor ambulances did not return in time to be ferried across the Lesser Zab, and returned to Fathah.

4. 27-10-18. The advanced dressing station crossed to right bank of Tigris by a ford. The tent division moved down on left bank and opened at ferry-head. The touring cars were ferried over in pontoons at noon. The Advanced dressing station opened at 1030

at Map A, CZ 84 a. Evacuation from the A. D. S. was by motorised ambulances and touring cars to ferry-head and then pontoons to left bank to tent division. Total evacuated from A. D. S. to tent division during day :—

	B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
Wounded ..	3	3	2	20
Sick ..	..	..	..	6

One touring car broke down and was taken over to the left bank.

5. 28-10-18. A. D. S. remained in same position. Tent division moved back about 1 mile from bank. Casualties received during 28th :—

	B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
Wounded ..	4	47	..	20
Sick ..	..	2	..	5

25 sitting cases were evacuated by Ford lorries from tent division.

6. 29-10-18. A. D. S. and tent division remained in same positions. Casualties received during 29th :—

	B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
Wounded	3	..	17
(9 of above belonged to 7th Cavalry and 53rd Infantry Brigades)				
		B. O. Rs.		I. O. Rs.
Sick	1		1
Evacuated from tent division by M. A. C. and Ford				
lorries	44
Transferred to 38 C. F. A. at ferry-head			..	17

Two motor ambulances rejoined from Fathah. The third was left near Fathah with a broken rear axle.

7. 30-10-18. After surrender of enemy 18 wounded Turks were collected and sent to 38 C. F. A.

At 1300 A. D. S. closed and removed to ferry-head right bank. Total casualties dealt with by 152 C. C. F. A. were—

B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
9	65	2	60

Prisoners of war 18.

The general health of the brigade during the operations was good. Admissions for causes other than wounds were :—

B. O. Rs.	I. O. Rs.	Followers.
21	45	2

AN ATTEMPT THAT FAILED.

By K. G.

An incident in the life of a prisoner of war in Germany.

Much water has flowed under the bridges since November 11th 1918 and even a prisoner of war, whose youthful ambitions were nipped in the bud at the very outset, must eventually put his disappointment aside and smile reluctantly at the stroke of fate which incarcerated him during those four years and perhaps kept him for some other destiny.

The further the long months spent in prison camps recede, the more comic various events in them seem, and one begins to realize that there were happenings which could well form the basis for an amusing story.

A series of events which took place in the prisoners of war camp at Maintz, in the spring of 1916, has often given me food for laughter and I don't think at the time that it occurred to anyone of us who participated in it how ludicrous the whole undertaking was.

This camp was in the old citadel of Maintz and contained some 500 officers, about 100 British, 200 French, 200 Russians and a few Belgians, most of whom had been captured in the early days of the war. It was a very difficult place to escape from and well guarded by a whole company of infantry which was changed every 24 hours. This daily relief precluded any possibility of bribing sentries which was one of the most usual processes of effecting escapes in other camps. Incidentally the sentries were posted outside the barbed wire fence which surrounded the camp and each one was overlooked by his neighbour, so that clandestine conversation with any one of them was impossible.

Various ways of escaping had been elaborated since we arrived in the camp in May 1915, but no one had ever succeeded in getting out of it. The Germans were always very much on the alert because most of the original prisoners of war, being regular officers, were considered valuable prizes as potential instructors of the new armies. Moreover, Maintz is only some 130 miles as the crow flies from the lines around Verdun and the firing there was audible when the wind was from that quarter, and the camp was used as a depot for the French officers captured on that portion of the front. All

this kept the reality of the war firmly fixed in the minds of our warders and the slightest laxness on their part was punished by immediate despatch to the front—a punishment which the class of man who guarded us dreaded as much as the death sentence.

Hence by March 1916 many of us had begun to despair of ever effecting an escape. By this time the efforts of the neutral embassies in Berlin, to cause a slight improvement in the treatment of prisoners of war, began to take effect and the camp authorities decided to extend the area of the camp and include within its bounds a gun-shed as a recreation room, which would be open to us by day, though closed after evening roll-call at 5-30. This gun-shed was to be divided into two rooms by a wooden wall—one-third of it being reserved as a silence room and the other two-thirds as a billiard room, with a bar in one corner at which a trusted German N.-C. O., who was permanently in charge of the building, sold extremely pernicious white wines at prohibitive prices.

This building was a great boon to all of us, as up till then, we had had no place to read or write except our sleeping rooms, which were horribly overcrowded, and in all of which nationalities were mixed up, French, British, Russian and Belgian. By doing this the Germans hoped to cause enmity between us, but, needless to say, the very reverse was the case; although there were times when one longed for a few minutes to oneself.

From the British point of view, however, the new building was of less value than to our allies. The billiard tables were French or Russian and the silence room was always crowded by very senior allied officers who considered it essential to admit no fresh air to their quietude. At this time the principal amusement of the younger ones among us was a race game, the name of which I forget, but in which you selected and backed your horse and it advanced by throw of dice over a steeplechase course, being penalised or disqualified for landing on or underneath any of the obstacles. The German authorities were only too delighted to see us kept amused by some such harmless distraction as it meant less worry for them from attempted escapes and other petty annoyances. We simulated the race-course atmosphere as much as possible and had our book-makers and tipsters who soon developed prices which would have been the envy of their confrères at Home. Eventually the camp authorities were persuaded to allow us to partition off a portion of the billiard

saloon along the wall of the silence room at the end furthest from the bar and reserve it exclusively for this game. The partition was three-quarters the height of the shed, and in order to increase the reality of the racing atmosphere, we were permitted to have a wooden grand stand erected against the silence room wall. This grand stand consisted of four wooden steps each about 2 feet above the other and about fifteen feet long and 18" broad. On these we sat and watched the racing, made our bets, and did our best to imagine ourselves on a racecourse at Home. For some days this created enormous amusement and large crowds of all nationalities of prisoners took part. The noise was tremendous, the heat terrific and the excitement intense. Meanwhile about six of us—all British—were much occupied with plans for escaping. We had explored all the buildings most carefully but to no purpose, and at this moment were toying with the idea of escaping dressed up as German officers. We had established communications with Home by means of a very simple code and had arranged to have the material for a German officer's uniform greatcoat sent out inside cushions, and one of the party who was very expert with chisel and paint brush had copied the German epaulettes and cap badges most accurately in painted wood. This plan was maturing when the possibilities of the newly opened gun-shed and the grand stand revealed themselves to us. On the outside of the gun-shed was a road leading to Camp Headquarters, then a barbed wire fence, then about fifteen feet of waste land, where a sentry was posted, and then a cliff. One of us who had had to visit a doctor in the town had noticed as he returned that this cliff was about 20 feet high and the ground below was used as a chicken farm. In an ancient guide-book to Maintz citadel which we had procured, we read that there used to be a tunnel leading from about this part of the citadel down to the river, which was a few hundred yards away. and so, after a council of war, we decided to dig a tunnel from under the grand stand, at a depth of about 10 feet, and aim for the chicken run, hoping to strike the ancient tunnel *en route*. We thoroughly realised the noise that the arrival of six human beings into a hen-roost by night would make, but decided that the risk was well worth taking, especially, as there was a chance of striking the old tunnel. We reckoned that we should have room for about 440 cubic feet of earth under the grand stand, and, as the tunnel would only be 35 feet long, about 3 feet high and one foot

wide at the top, increasing to three feet wide at the bottom, we should have plenty of room to spare.

Having formulated our plan we wasted no time in getting started, but difficulties presented themselves at every turn. First of all secrecy was essential. In every camp a large proportion of the prisoners had no occupation whatsoever and so busied themselves with the affairs of others, with the result, that it was extremely difficult to carry out the minute preparations necessary for an escape. Once one had selected the weak spot in the defences one had to have a close look at it. This usually meant that some one of the other five hundred who happened to be looking in that direction, having nothing else to do, put 2 and 2 together and told his friend in strictest confidence what he surmised. The next day every one in the camp glanced at the spot as he passed it and wore a conspirator's look and by the evening the ever-watchful German placed a sentry at the point of interest and another possible exit was blocked! Imagine what our difficulties would be in a task which involved several weeks' work.

Secondly, we had to get underneath the grand stand and this meant making the top of one of the wooden steps removeable! Here our difficulties were to get at the step when no one else was present and to avoid arousing the suspicions of the German barman, who happened to be a most alert and suspicious person. From the top of the grand stand this man was just visible as he sat at his bar and sold liquor and so we decided that there should always be some one in this position, reading, or watching the race-game, to accustom the barman to someone's presence there. We made one or two attempts to move the step but to no avail as the barman was disturbed by the least noise and came to see what was happening. Eventually the problem was solved by a British Officer receiving from home the gift of a ping-pong set. This we borrowed, set it up in the race-game room and began to play during meals when no one else was in the recreation shed. For a day or two the barman found the game of absorbing interest, watched us incessantly and became frantically excited over long rallies and good strokes. Those not playing bought drinks off him and we all made it a rule to make as much noise as possible. Shortly his interest waned and one day during the luncheon hour, two of us played as noisily as possible, two kept cave, cheering lustily from the top of the stand and the other

two succeeded in getting out the long nails from the step, taking it up and substituting short nails. In ten minutes we had so arranged it that we could lift the top on and off noiselessly and rapidly. As soon as this was done W. got under the stand to investigate what was there and we were able to let him out again after a few minutes. We then went off to our room and held a council of war.

W.'s investigation showed that the whole floor was of cement, and it was impossible to judge how thick it was. Our first task, therefore, was to cut through this and our only tools were a hammer and various old pairs of scissors. Our next difficulty was to get in and out of the grand stand and the only possible times were immediately after 9 a.m. roll-call before anyone else came into the room, during the luncheon interval and immediately before evening roll-call when everyone had left the shed and the barman was busy putting away his bottles. Nevertheless we decided to start work next day and begin by going under the stand one at a time with a relief at midday. We arranged alarm signals as follows—one loud knock on the grand stand meant make less noise—two knocks—carry on or all clear—three knocks—great danger, don't move, a continued rubbing on the top board with hand or boot meant I want to talk to you through the boards. We then drew lots for duties and W. had the honour of going "down the mine" first and starting the work, F. was to relieve him at midday, T. had the first spell of "cave" work and L. was his relief. S. and I. constituted the noise party as required. We opened a bottle of wine to the success of our enterprise and really felt things were moving at last.

Next day everything went well, we rushed to the hall immediately after roll-call and began a violent ping-pong match. W. was pushed under the stand without difficulty—except that the aperture was a bit narrow for his large body—and by the time he had got his bearings and was ready to start operations the race-game crowd arrived. T. took up his position on the top of the stand and the remainder of us stood about trying to look as innocent as possible. Then W. got to work and, of course, to us who were expecting it, the clink, clink, as the hammer hit the scissors, sounded very loud but the gamblers did not notice it and the barman carried on his job in equally blissful ignorance. After an hour or so I had a sudden brain wave and went into the silence room to hear how it sounded

there, and to my horror it was just as if W. was working with no partition at all between him and the stolidly reading senior officers. Every blow of hammer on scissors made the whole chamber vibrate and I soon heard one reader enquire of another what on earth was going on outside. This was too much so I returned hastily and signed to T. to warn W. to make less noise, and S. took a turn in the silence room.

All went well till lunch when we started another rowdy ping-pong match on the departure of the gamblers, got W. out without much difficulty and put in F. in his stead. We provided F. with a new pair of scissors and improvised a pad to put on the top of them to deaden the sound of the blows. W.'s clothes on coming out were filthy so we decided to bring some old pyjamas and put them down the mine to serve as working overalls. All went well till evening roll-call, when we extracted F. without mishap, cleaned him up for inspection as well as possible and shut down for the day. We held a council of war in the evening when it was decided to have some one permanently in the silence room. F. reported that the cement was so hard that he and W. had only made the barest impression in spite of eight hours work and the utter ruin of two pairs of scissors. This continued for about a week and we grew very despondent, the first day I went down it took me some time to find the result of the 16 hours work already done, although I knew that the hole was to be within three feet of the outside wall. Stoppages were frequent owing to visits paid to the race-game by German officers and, worse still, by this time the enthusiasm for the game was waning and the volume of noise which emanated from the room grew less. On several occasions the barman noticed the clink, clink, and work had to be stopped till his attention was attracted elsewhere. Usually one of the conspirators had to buy a drink! At the end of the week we had a stroke of fortune. A German workman was sent into the camp to effect some minor repairs and, though he was carefully guarded by an armed soldier, we managed to steal his hammer and a couple of excellent chisels. This quickened the pace of the work but the cement was terribly thick; the noise, in spite of pads, seemed to increase and the players of the race-game decreased to such an extent that one morning there was no play at all. We were in a quandary and those outside got more weary making covering noises than the actual worker under the stand. One evening at a council of war a great brain wave came to us. Ping-pong was

again to be our salvation in the following way. Two of us would be on permanent duty to play and the object of the game would be to make the rallies as long as possible and the worker would clink in time to the ping-pong of ball on bat. This worked excellently. The server would announce "Are you ready, one, two, three," and then the worker would clink in unison with his first blow and so on till some one took his eye off the ball, missed, and a solitary clink reverberated through the hall. It took a fortnight to get through the cement, which was five inches thick, and then the interest increased. We now set out to make the hole big enough for a man to squeeze himself down it and dig. We sewed up bags to carry the earth from the hole to the opposite end of the grand stand, where it was to be stacked, and managed to steal a few necessities, such as a night sentry's lantern—it was quite dark under the stand—a couple of shovels and some pointed tools for dislodging earth. By the end of a month we had sunk our shaft ten feet and made it wide enough to squat at the bottom of it and dig. We now worked with two under the stand at the same time and were able to dispense with the man in the silence room. The two on duty divided the work as follows:—No. 1 went down the hole and dug, put the earth into the bags and handed them up to No. 2 who crawled along under the stand, emptied the bags at the far end and packed the earth. When No. 1 tired No. 2 took his place and so on. When possible we had a double relief at midday, but sometimes this could not be done and then the unfortunate pair were left down the mine all day. The final closing down just before roll-call was often difficult but was vital and we never failed to manage it somehow. We also procured some more old clothes and felt slippers to wear while working and kept them under the stand, so that the workers came out fairly clean. There were various moments of especial excitement. On one occasion the alarm was given in the middle of the midday relief, but fortunately at a moment when the relieved couple had got out and before the relieving pair had started to climb down. We put the board back just in time and were sitting on it when the German officer of the day entered. On another occasion an extremely fussy general and his staff came to inspect the camp. We had a day off on inspection days as they entailed sudden roll-calls, and, on this occasion, were sitting nonchalantly on the scene of our operations when he visited the recreation room. He examined our ping-pong rackets

with great interest, poked his nose into every corner and to our horror noticed the loose board in the grand stand. He cursed all and sundry with Teutonic violence for not having this put in order for his visit. The camp commandant grovelled, promised that the camp-carpenter should be punished and the matter put right immediately, but fortunately it was forgotten. On another occasion I was sitting as guard on top of the stand, when, to my horror, a German civilian arrived carrying a bucket of water and scrubbing material and accompanied by the inevitable armed sentry. He informed me that he had been instructed to scrub the grand stand. I immediately volunteered to assist, saying I had nothing to do, but the sentry, no doubt suspecting some form of bribery, refused my proffered help and told me I should be severely punished if I spoke to a civilian as this was "streng verboten." However, this conversation had the effect of so frightening the civilian that he started work at the furthest corner of the stand from that on which I was seated. I gave the alarm (3 knocks) at once and repeated it at intervals, but unfortunately the civilian started rubbing the boards which was the signal for conversation and I could hear L. (who was working below) whispering up, "Yes, what is it?" I continued knocking and yelled to friends in the billiard room at the top of my voice that they scrubbing the grand stand. This brought a crowd to watch and the sentry growing nervous began a loud conversation with the civilian. Eventually L. gathered something was up, kept quiet and all passed off successfully, but it was a bad half-hour and incidentally L. and his companion below were drenched by the water which the civilian poured over the boards. Just before this we had had to put paper all along the inside of the grand stand to prevent the earth leaking out of the cracks.

By the end of another week we had progressed some six feet towards our destination, averaging about a foot a day. At first our advance was very slow as the ground was extremely hard and our implements were poor. Also we encountered large boulders which were very hard to move, but later the digging became easier and all went well till one day a great slab of the roof of the tunnel fell in. I was working at the time and it was a most unpleasant sensation and made it obvious that we must get something down to support the roof as we were already under a road and heavy traffic to and from

camp headquarters passed over us. Again ping-pong came to our aid. The craze for this game had increased in the camp and there were several tables in different rooms and one which belonged to one of the conspirators. We therefore stole a saw and cut this table up into suitable lengths, each six inches wide, and set these up in the tunnel in pairs leaning against each other and a foot apart. It was no easy task to get these to the tunnel and they had to be carried tied round the waist under an overcoat. Incidentally the weather was peculiarly hot about this time. Everything seemed to be going according to plan and we were beginning to mobilise our kits for the trek across country when a most untoward stoppage occurred. F. was working No. 1 and I was No. 2 waiting for some bags to be handed up when he suddenly came to the bottom of the shaft and whispered that the wall in front of him had fallen in and he thought we had struck the old tunnel leading to the river. You can imagine our excitement. He went back to investigate and returned shortly saying he couldn't make it out. The place he had got into seemed to have no exit and the atmosphere was so awful that the lantern went out, no light would burn and he was almost overcome by the fumes. I took his place and found that the entrance he talked of was about 2 feet 6 inches square, and, after trying in vain to light the lantern and strike some matches, I crawled in—I could feel two walls composed of long slabs of stone on either side of me and after progressing some six feet I bumped my head against the wall at the end. To my intense annoyance I found this also to be composed of large slabs of stone. I then started to dig down and immediately unearthed something like a football. I took it out and found it to be a skull! We had struck a tomb. By this time I was feeling far from well and so came up and on consultation with F. we decided to strike off at an angle and use the tomb for storing earth. We were both feeling intensely sick, and, fortunately, the midday relief took place soon afterwards. We hastily explained what had happened and W. and T. went down to carry on the work. We let them out at 5-30 and by this time F. and I were feeling really ill. W. and T. reported the atmosphere down the tunnel as rather bad and it was noticeable in the recreation hall as well. They had, however, filled the tomb with earth and reported good progress. The next morning all four of us who had been down were ill with the most painful sore throats and we were laid up for three days and the work was delayed in consequence.

By the end of six weeks' work we reckoned that we had completed rather more than half of our task. Everything was working easily and well and on some days we were advancing so much as three feet. We thought we should be ready in another ten days and this would get us out in the second week in May. Our kits were ready and mostly stored under the stand. We had also stolen an electric torch (these useful adjuncts to escaping were forbidden fruit) which was of great assistance.

Little did we know what a bombshell was in store for us. It is easy to be wise after the event, and on looking back I can see the various reasons which had made the Germans suspicious. Parcels and letters were frequently arriving from England and neutral countries and most officers were easily accessible when the censor wanted them ; we, however, were sometimes not to be found. On one occasion they were looking for L., could not find him and so had a sudden roll-call and we only got him up just in time. Then there were the various thefts of articles which would be found in most burglar's equipments, and then, no doubt, there were times when we looked very guilty. We had had to admit several other prisoners to our secret usually because we thought they had guessed it, and they helped us most loyally. We arranged with them to close the tunnel at its exit after using it and gave them the chance of following us after 24 hours.

Anyway, we learnt afterwards that the camp commandant wrote about this time to headquarters, that he suspected something was afoot among the British Officers, and recommended our immediate removal to a camp further in the interior of Germany. Headquarters concurred and so the very next day the bugle went for roll-call at 4 p.m. The couple on duty were extracted from the tunnel just in time and got on parade, and to our horror the interpreter read out that all British Officers were to be ready to leave the camp by 11 next morning and be on parade by 10-30 a.m.

We were dumbfounded—all our labours in vain. However, we held a meeting and decided that there were only two courses open—either to hand the tunnel over, lock, stock and barrel to our allies or to go down it the next morning, have ourselves nailed in and dig our way out. We reckoned that there were about ten more feet to finish. We soon discovered that our views differed and after

much discussion, W. S. and I decided to go to the new camp with the possibility of escaping *en route*. F. L. and T. decided to go down the mine and dig for freedom. We spent the evening filling the stand with provisions and W. S. and I removed our kits. The Germans were rushing about all over the place and our allies arranged a concert in the recreation hall by special permission to bid us farewell. We got to bed late and at 8 a.m. the following morning there was an unexpected roll-call. Guards round the camp had been doubled by night and all of us were present at this parade. As soon as it was over we put F. L. and T. under the stand, but, unfortunately, they decided not to have the loose board nailed down so that they could come up and stretch their legs by night when the room was closed and empty.

This was their undoing.

At 10-30 the fateful roll-call took place and F. L. and T. were found to be missing. We all denied any knowledge as to their whereabouts and the Germans were furious. They knew they had been on parade at 8 a.m. and could not have escaped from the camp in the interval. However, the officer and escort arrived to take us to our unknown destination and we were duly marched off and put into our train. After numerous delays we reached Frankfort and were told we had to wait an hour.

Three-quarters hour had elapsed when to our horror we saw a jeering crowd approaching us. In the middle of it were some German soldiers escorting our poor friends L. T. and F. who were dressed only in the tattered pyjamas they had been digging in. They looked extremely disconsolate and the crowd was doing its best to increase their discomfort by taunts and missiles.

They were put into solitary confinement in our new camp, Friedberg, tried by court-martial and punished with a term of imprisonment. On their release L. and T. were sent to other camps, but F. returned to us and we heard what had happened.

As soon as we had been marched out of the camp pandemonium broke loose. All prisoners of war were sent to their rooms and a special company of soldiers was borrowed from the town garrison, marched to the camp and told to search it until the missing officers were found. All possible precautions outside the camp were taken and the whole countryside was scoured.

The search in the camp lasted fully two hours, the recreation hall was visited and revisited but no one suspected the grand stand. F. L. and T. were laughing up their sleeves and thinking what fools we others had been. At long last a solitary soldier came into the hall, "fed up" with the whole business and grousing to himself. Unfortunately he sat down plump on top of the loose board, noticed that it moved, lifted it up and the Maintz tunnel was discovered! L. T. and F. surrendered and tried to come out but the soldier started yelling and screaming and pointed his rifle at them. Officers and men rushed up from all directions, orders were shouted out and amidst unheard of chaos and under a battery of revolvers and bayonets our poor would-be escapees were permitted to crawl out and immediately seized. The grand stand was smashed to atoms by the infuriated soldiery and a particularly daring man went so far as to venture down the tunnel. It is not recorded whether he received the Iron Cross for this display of valour, but his explanation on return seemed to excite the Germans to further frenzy and the lives of L. T. and F. were in great danger when one of the German officers rapped out a command, silenced his soldiers, and turned to his three prisoners with a look worthy of his pompous and theatrical emperor and pointing to the debris of the grand stand said, "Gentlemen, this was built for use, not abuse."

A HUNDRED YEARS OF HIMALAYAN EXPLORATION.

(A lecture delivered in Simla on 2nd August 1928, by Major Kenneth Mason, M.C., R.E., Survey of India).

I am using the term Himalaya tonight in its widest sense: Not merely "the Abode of Snow," nor yet the great range of high peaks that geographers call the Great Himalaya. I include the whole complex series of parallel ranges, of immense tablelands, of intricate valleys and of mighty rivers which stretch for 2,000 miles from Afghanistan to Burma and for over 500 miles northwards from the plains of India. Collectively they form the greatest physical feature on the earth. Put together all the ranges of Europe, great and small, and include if you like the Caucasus and Urals, and you will not get a mass comparable to the Himalaya. Set down the western end of the Himalaya at London, the eastern end would lie beyond Moscow. Plant the Jungfrau on the summit of Mont Blanc, or pile eight Snowdons one upon the other and you will get some idea of Everest.

In one hour it is only possible to outline very briefly the geographical story of the last hundred years. I shall begin a hundred years ago and to make my subject clear I shall divide the period into five parts:—

- (i) The First period of Adventurers.
- (ii) The Advent of the Survey of India.
- (iii) The Indian Explorers.
- (iv) Modern Adventurers.
- (v) Modern Scientific Exploration.

Each of these periods covers about 20 years.

A hundred years ago Sir George Everest was Surveyor-General. The map of India was, as far as the north was concerned, not far advanced from the great atlas compiled by James Rennell in 1790. It was made up of isolated journeys and small patches of reconnaissance sketches based on rough astronomical data collected and pieced together as well as possible. Places were frequently as much as forty miles out in position. The Great Trigonometrical Survey of India had come into existence in Madras, and William Lambton, the first Superintendent, had brought his framework to Central India. He had just died, a veteran of 70 at work with his telescope, and George

Everest his enthusiastic successor was carrying the work forward toward the mountains.

Something was known of the Himalaya but not much : enough to fire the enthusiasm of a few adventurers. Warren Hastings had been interested enough to send Bogle and Turner by Sikkim and Bhutan to investigate trade possibilities with Tibet. Thomas Manning, disguised as a Chinese doctor, had reached Lhasa and been cast out. But west of this, Nepal, Kumaon, Ladakh and Kashmir, to say nothing of almost the whole of Central Asia, were practically unknown. The great Ganges was shown on Rennell's map as rising north of the great range and tunnelling under it, and Raper and Webb had been sent by the East India Company to investigate this extraordinary phenomenon. The mysterious Moorcroft had already attained notoriety by reaching Gartok and by being captured and imprisoned by Tibetans "at the northern foot of Himalcha mountain." Over hundred years ago in fact begins about the time that Moorcroft offered to sell Ladakh to the Company. The offer was refused, I believe, for three reasons ; first, the Company was not quite certain where Ladakh was ; secondly, Ladakh would not have been much use without the Punjab ; and lastly, Ladakh wasn't Moorcroft's to sell. Moorcroft is said to have been so disappointed with his treatment that he migrated to Lhasa in disguise and was murdered there some 12 years afterwards.

To sum up : not much was known of the Himalaya a hundred years ago. Our great-grandfathers had a general idea of the political divisions and they knew that Lhasa was north of the mountains. But I am quite certain that no one would have placed Lhasa in roughly the same latitude as Delhi.

I cannot spend much time on the early adventurers. I will mention only the travels of Vigne in Kashmir about 1835, and of Wood to the Pamirs in 1838 and his discovery of Lake Victoria, one of the Oxus sources. For the most part the adventurers of this period flit across the Himalayan stage with interesting but not always creditable records. By their route reports and their rough sketches they added to our knowledge. In this period a few sportsmen entered the hills from Simla or Mussoorie in search of game, and there was a sporting adventurer or two in Kashmir ; but their records are difficult to trace. The period closes with one outstanding event.

Everest, the Surveyor-General of India—"Never Rest" as he was called in the Survey, for he carried out his work even when paralysed in both legs, and was lifted in and out of his observing seat by pulleys—Everest, I say, pitched his camp at the northern end of his great scientific framework of India. At Banog near Mussoorie he completed his life's ambition. He looked back over the plains of India, and saw the monsoon come up to the hills. He laid out our northern base-line and made Mussoorie into a station. He constructed many of its roads out of funds derived from his "Lake allowance." Now Mussoorie was well explored in those days. It neither had then nor has now any lakes. That a Surveyor-General could successfully draw such an allowance gives us an interesting glimpse of the Company's knowledge of the hills. It also shows us a delightful little lapse on the part of the Company's Audit Department. Everest also gazed across at the great white rampart of snows, and vowed that one day the work, which his predecessor had begun, would cross it.

My second period is from about 1845 to 1865. With the advent of scientific survey a new era began in the exploration of the hills. Chains of primary triangulation were run along the foothills: this primary work lasted from 1846-1855, and was of very great accuracy. It was during the computations of the north-eastern observations that a babu rushed on one morning in 1852 into the room of Sir Andrew Waugh, the successor of Sir George Everest, and exclaimed: "Sir, I have discovered the highest mountain on the earth." He had been working out the observations taken to the distant hills. It was Sir Andrew Waugh who proposed the name Mount Everest, and no local name has ever been found for it on either the Tibetan or the Nepalese side. *Mount Everest in fact has no local name*, and no amount of questioning Tibetan mule-drivers will find one. The little boy was wrong, when he replied to the question "Who named Mount Everest and why?" "General Bruce, because he said, when I get to the top I shall 'ave a rest."

Everest is the only peak to which the Survey of India has given a personal name: and this name has now been accepted for over 70 years. The name *Godwin Austen* for the peak K₂ was proposed in England in 1888 and still appears on some unofficial maps, but it was not accepted by the Survey or Government of India, nor have others, which have been proposed by private explorers. I should

perhaps state that Makalu, the fourth highest peak in the world, and the south-eastern outlier of Everest, is believed by some to be named after Macaulay. The name is not known locally and I am unable to say definitely who named this peak or when.*

Nepal was then and has remained until recently a closed country to scientific exploration. Sir Andrew Waugh, however, had plenty of new ground to deal with. The newly acquired territory of the Punjab afforded a fine opening, and the exploration and survey of Kashmir was taken up. Mountaineering was a haphazard pursuit in those days: even the Alps were dreaded and not properly mapped. I believe it is a fact that our predecessors mapped Kashmir and Ladakh, Lahul, Spiti, Kulu and Kumaon before the Swiss had a complete map of their Alps. During this survey 37 mountains, over 20,000 feet were climbed and observed from with the theodolite and five over 21,000. The world's altitude record was held for 20 years by a khalasi of the Survey of India on about 8 rupees a month, who in 1860 carried a pole to the top of Shilla, a peak east of Spiti, 23,050 feet above the sea. That khalasi did not measure the height of the peak himself!

I will mention two leaders of these surveys, Montgomerie and Godwin Austen. Montgomerie was the organizer, the brain and the scientific triangulator. He planned the great network that covered the mountains. At the station of Haramukh in 1857 he entered his observations in the direction of the Karakoram range under the peak designations, K₁, K₂, K₃, &c. When these were computed, K₂ was found to be the second highest mountain of the earth. Godwin Austen was the fearless explorer, the enthusiastic pioneer, geologist and artist. He was probably the greatest mountaineer of his day, and some of the glaciers he trod, and the passes he crossed have never since been visited. He was the first to view K₂ from close quarters. Four years ago I was staying with him in England. At over 90 years of age his story kept me fascinated for a whole afternoon without a break. Less than two months before his death his mind was as clear as crystal. He discussed with me the plans I then was formulating.

*Major H. T. Morshead, of the Survey of India, who accompanied the first two Everest Expeditions, thinks that *Makalu* is a corruption of *Kama lung*, from the *Kama Valley* which it overlooks on the north, or possibly of *Khamba-lung* from the *Khamba* district of Tibet, which it adjoins. This is borne out by an old panorama drawn by the explorer Rinzin Namgyal in 1884, where the mountain is figured: "Peak XIII, *Khamba-lung*, 27,790 ft." Colonel Tanner of the Survey was however at that date already using the word "*Makalu*."

Of the various assistants who worked under Montgomerie and Godwin Austen, I could mention many. But I feel I must confine myself to one: W. H. Johnson. This man was born and educated at Mussoorie, where he grew up a somewhat hot-headed youth. But he was bitten by the mountain germ early. In 1851 he carried out a difficult triangulation connection between the Bhagirathi and Sutelj. Three years afterwards he succeeded in completing the reconnaissance survey of the Baspa region, over the snows you see from Simla, after the failure of two previous survey efforts. He rapidly rose in the Department. During the survey of Kashmir, he twice observed from over 20,000 feet in 1861 and seven times in 1862, and his four highest stations of observation I believe still hold the world's record as such. Unfortunately the more Johnson saw of the snows the further he wanted to go. He applied to the Government of India to let him explore into Central Asia. Hearing unofficially that his request was going to be refused, he secretly borrowed Rs. 15,000/- in Dehra Dun and Mussoorie, crossed the Kun Lun Range by two unknown passes, and reached Khotan, where he stayed with the rebel ruler Habibullah. He was detained and only got back with difficulty. It was a very fine performance, but unfortunately Johnson did not stick to facts on his return, his survey work was somewhat imaginary, and he left the Survey of India to take up the Governorship of Ladakh, where he was foully murdered. It is a curious fact that for many years both the Alpine Club and Geographical Society blamed the Survey of India and the Government for not fully appreciating Johnson's services. A remark of the President at a meeting of the Alpine Club led me to investigate the whole of Johnson's story and I then found that General Walker had done his best to cover up Johnson's shortcomings, that he had moved Government to pay Johnson's debts and ransom to the extent of Rs. 16,400/- in addition to the cost of the journey; and that it was Johnson himself who overstepped the bounds of prudence by "soliciting H. E. the Viceroy to confer on him such a pension as would enable him to live in comparative comfort for the rest of his life"; while still a comparatively young man. There was a Finance Department even in those days.

Of the non-official and semi-official element of this period I will only mention the two Schlagintweits, one of whom was murdered in Kashgar in 1857, the two Stracheys, Richard and Henry, Dr.

Thomas Thompson and Alexander Cunningham, the last three of whom wrote valuable reports on Ladakh and Kumaon, and who were collectively responsible for the rough delimitation of the south and east boundary of Ladakh.

I leave this 20 years with the remark that the greater part of the area within the Indian borderland west of Nepal had been explored, and a good reconnaissance map made of most of it.

I always think that the third period, 1866 to 1886 is the most romantic—the period of the Indian explorers. Regular survey had nearly reached its limits. Chinese Turkistan was in a very unsettled state. The Tungan rebellion had broken out in 1863. Tibet had retired into a state of exclusivism and aloofness. The Indus valley tribes were actively hostile and Hunza Nagar openly predatory. Our trans-frontier maps were still a blank, and within our borders the survey of certain parts was abandoned. From the Black Mountain on the south to Bunji, the Indus was unvisited; Gilgit, Chitral and Chilas were unexplored; Yarkand itself was 200 miles wrong on the map; Central Tibet was a complete blank. The position of Lhasa was still conjectural and only one point of the Tsanpo was charted.

Montgomerie and Walker of the Survey of India now set about training Indian explorers to lift the veil. These were engaged at the princely salary of from Rs. 16 to Rs. 20 with promised rewards for good work. The details of some of these journeys are of extraordinary interest, but I can only mention a few. The first of these explorers, Nain Singh, a schoolmaster in Kumaon, was enlisted and taught survey. He was the son of the man who had rescued Moorcroft in 1812. His first effort to penetrate Tibet through Kumaon was a failure; his second through Nepal met with better luck. After finding himself penniless in Tibet, he joined a caravan going to Lhasa and reached this place in January 1866. Here he earned a scanty living as a teacher of accounts, and afterwards made his way back to India. He brought back a map of the southern trade route of Tibet and a sketch of the Tsanpo for 600 miles, besides a valuable report.

Other pandits were now engaged and despatched. Some elected the disguise of traders, some went as lamas, some as mullahs. The mullah had a little compass which pointed the way to Mecca! and the trader carried drugs that cured diseases! The lama surveyor

walked on foot with his rosary counting his beads, and his paces. At the end of a hundred paces he would swing his prayer wheel "Om mani padmi hum" "Oh Jewel of the Lotus arise," and inside the prayer wheel a hundred paces were recorded. I may mention that the Tibetan rosary has 109 beads, while the survey pattern had exactly one hundred!

These pandits were mostly known to the world by two initials, generally the last sounded letter and the first. Thus Krishna, or Kishen Singh, was known as A K., Kalian Singh, GK., Abdul Subhan, NA. A few were known by titles: Nain Singh was always the Pandit; Ata Mohammed, the Mullah; Mirza Shujah, the Mirza. It was one of these men, Hari Ram, MH. who in 1871-2 made the first circuit of the Everest group.

Nain Singh's greatest journey was in 1874 when disguised as a lama he succeeded in traversing the whole of Tibet from Ladakh to Lhasa by the great northern route. He was nearly caught out at Lhasa, but eventually got down to India by Bhutan.

Personally I always look upon Kishen Singh, or A K., as the greatest of our explorers. I will pass over his first two journeys, valuable though they were. His third and last commenced at Darjeeling in April 1878. After reaching Lhasa he started northwards for Mongolia. He met with desperate hardships, was robbed by bandits, stripped and deserted by all his men save one, Chumbel. In spite of adversity he pushed on and reached the extreme N.-W. confines of Kansu, carrying out his survey all the while. All trace of him was lost in India and hope was given up, when 6 years after his departure the worn-out traveller returned. His health was broken and it was doubted whether he would survive. You will be glad to know he drew his pension for 30 years.

Both Nain Singh and Kishen Singh received honours from the Geographical Societies of Europe and generous grants from the Government of India. I wrote a short history of these men for the R. G. S. a few years ago and in looking up their old records I found the terse remark in Kishen Singh's: "accurate, truthful, brave, and highly efficient." Time has endorsed all four qualities.

I must not give all the credit to the Hindu explorers. Our knowledge of the north-west was gained by much the same means, but naturally Mahomedans were employed here. The most interesting of these was Ata Mahomed, "the Mullah." He was a well-educated

native of Peshawar, versed in Arabic and the brother of a sapper murdered in Swat in 1869. His greatest exploration work was up the wild gorges of the Indus from the plains to Bunji, and our map almost till today rested on his work. He also gave us our first map of Swat, which survey he undertook in the disguise of a timber merchant. These surveys have only just been superseded by modern work carried out in the last three years. Then there is Mirza Shuja, who as a lad served under Eldred Pottinger in Herat. To him we owe a map of northern Afghanistan and the Pamirs. He then became tutor to the sons of Sher Ali at Kabul, afterwards rejoining the Survey of India ; but he never returned from his last expedition being murdered with his son-in-law by his guides.

One more instance of the Indian explorer before I leave this period. By 1879 the general course of the Tsanpo of Tibet was known, but its identity with the Brahmaputra of Assam was not proved. Captain Harman of the Survey of India in that year trained a Chinese lama as an explorer and sent him into Tibet. The lama was told to follow the river down as far as possible, and then to mark and throw logs into it. For two years Harman had the rivers of Assam watched. No logs arrived, Harman went sick and the watch was abandoned. Four years passed. Then a hill Indian named Kintup, who had been in the service of the lama returned from Tibet and asked for the survey authorities. He told his story : how the lama had taken to a life of ease and sold him into slavery : how he, Kintup, had worked for his freedom and made his way down the Tsanpo : how he had been captured and had escaped to continue his journey. He detailed a series of places he had passed to the spot where he declared he had cut logs and cast them into the river, in the hope of carrying out the original orders. The Survey of India believed him, but his story was not generally credited and it was many years before it was proved true. Kintup was then sought out by the Surveyor-General, Sir Sidney Burrard, and suitably rewarded for his courage and determination of thirty years before.

I am spending much time on this period. I might mention the names of Shaw, of the members of the Forsyth mission to Kashgar, and of Colonel Woodthorpe. More openly than had previously been possible they sketched the Karakoram trade routes, Chinese Turkistan, Hunza Nagar, Chitral and the southern Pamirs. They had few fixed points to work from and most of their work has been superseded.

I must, however, allude to Hayward's tragic end in 1870. He was exploring the remote district of Ghizar, near the Darkot Pass north-west of Gilgit. The tribes became hostile, but he persevered. At last the climax came and he learned that the local tribesmen intended to murder him. He dared not rest or lay down for nights, and sat up in his little tent with his rifle across his knees. At last he fell asleep, and the tribesmen rushed in and secured him. He asked to see once more the sun rise over the mountains, and was allowed to climb a hill by his camp. Then he turned his back on the sun and was butchered in cold blood.

I must now turn to my fourth period, 1885-1905, and it becomes increasingly difficult to select my stories from the growing mass of material. In this period, the mountains became more settled and we have expeditions organised from Europe lending a hand. We have Sir Francis Younghusband's adventurous crossing of China from Peking to Kashmir, and Sir Martin Conway's climbing expedition in 1892 with the introduction of Italian guides to the Himalaya. We have Sven Hedin the Swede, and Littledale and Bower all attempting to get to Lhasa, and the latter's successful man-hunt into Central Asia. The story of this perhaps bears repeating. One Dad Muhammad, a Pathan trader of Leh, was camped beside an English trader, Dagleish, on the Karakoram Pass. After a friendly greeting he treacherously murdered Dagleish, sacked his caravan and fled into Central Asia. Bower, on a shooting trip in Ladakh, received prompt orders from the Government of India to pursue the murderer and bring him to justice. I have already pointed out that Central Asia is some size. However, Bower hunted Dad Muhammad all over Chinese and Russian Turkistan, and eventually drove him into a well-laid trap in far Samarkand. Dad Muhammad was seized and imprisoned; and while the Foreign Offices at London and St. Petersburg were arguing his extradition, he hanged himself in his cell. The long arm of British vengeance had not been forgotten when I was told the story on the Pamirs 23 years afterwards.

The Survey of India policy about this time was to attach surveyors to various explorers and to military expeditions. Thus Atma Ram went with Bower on his journey in Tibet, and Deasy, Rawling and Stein all had surveyors to map the country they passed through. Our numerous little frontier wars also gave us the opportunity of improving our maps of the north-west. An uncle of mine,

A. H. Mason of the Intelligence Branch, and Wahab of the Survey of India were closely connected with this work. The Pamir Boundary Commission of 1895 gave us an accurate map by Holdich and Wahab of the Great Pamir. I shall close this period with a mention of the Tibet Mission which from a geographical standpoint gave us a map of the Brahmaputra upwards to its source, by Ryder and Wood of the Survey of India.

Before commencing my fifth and last period, 1905 to 1925, I will put on the screen a chart which will give you some idea of the activities of explorers in the third and fourth periods. It represents forty years of travel. But vast though those journeys were, they are not enough, and we aim at getting a map based on fixed points. The greater part of the area was at the beginning of this century much as was the map of India in the time of Rennell. It consisted of journeys pieced together, with caterpillar-looking mountains in between. The beginning of this century saw a great increase of accurate knowledge and a demand for more accurate knowledge, and for contoured maps. Early in our final period I must mention Sir Aurel Stein's second expedition into Central Asia. Though his object was primarily archæological, both he and the two surveyors he took with him accomplished a vast amount of geographical exploration.

In 1909 further expeditions from Europe under the Duke of the Abruzzi and Dr. Longstaff added to our knowledge of the northern boundary of Kashmir; while about the same time a complete new survey of Kashmir itself was undertaken by the Survey of India. Our Indian primary triangulation was taken through to Gilgit and during 1911 and 1912 the work gradually progressed towards the Pamirs. In 1912, Lieut. Bell, who was in charge of the work, died, and his monument lies on the Pamirs. In 1913 I completed the work with the Russians on the Russo-Chinese frontier at Sar-bulak, at the extreme northern point of the Indian Empire, 17,000 odd feet above the sea. The error at the junction, as Sir Geoffrey Corbett has said, was less than 2 yards. In the east, the Abor, Miri, Mishmi, and other expeditions led to a great increase in our geographical knowledge of the country north of Assam and Burma, and Trenchard of the Survey of India discovered another mountain, Namcha Barwa, of over 25,000, while Morshead and Bailey successfully explored the unknown gap in the course of the Brahmaputra.

When the war broke out, Wood of the Survey, attached to the De Filippi expedition in Central Asia, had just mapped the main source of the Yarkand river, and we had surveyors with Sir Aurel Stein on his third expedition in Turkistan.

In the war the attentions of the Survey of India were directed to Mesopotamia, Persia, Macedonia and East Africa. But since 1918 several expeditions have pushed into the Himalaya. These are, however, of recent date and there is no need for me to go over the ground covered by the three Everest expeditions or the explorations of Sir Henry Hayden, the Vissers and Montagnier.

I will now put on the screen a map showing what has been accomplished to date and what remains. The areas now surveyed are shown in red, while those that remain to be done are white. Across these white patches you will still see the explorers' route lines with new ones added. In the red areas we know the topography; rocks have been collected and flowers picked. We know something of the botany, geology, glaciology, zoology and all the other "ologies" of these regions. We want to know much more. But first and foremost we must fill the blanks of ignorance.

Beginning with the north-west, you will see the white blank of the Pamirs. It perhaps should be shown as surveyed, as the Russians have been at work here for a number of years, and their maps are improving. But this area is not yet surveyed accurately. The same applies to the T'ien Shan. Both these areas are forbidden ground to our surveyors, though sportsmen occasionally get passports to shoot there.

The next blank I will mention is the great Tarim Basin—the Taklamakan Desert and the desert beyond Lop Nor. These areas might also be called surveyed or unsurveyable, for we know that they are waterless uninhabited wastes covered with sand-dunes. Sven Hedin and Sir Aurel Stein are our authorities.

Another great blank is Tibet. Tibetans are a very shy and reserved people, and hate surveyors. Otherwise there would be no difficulty in surveying Eastern Tibet. But as you see, travellers have made a good network of journeys and one day we hope to get a triangulation series from the Eastern Himalaya to Tunhuang.

Nepal should no longer be shown as a blank. By the enlightened act of His Highness the Maharajah of Nepal, we have been permitted

to send surveyors into that country, and the work which was commenced in 1925 was successfully brought to a conclusion last year. This survey, which was entirely carried out by Indian surveyors trained by the Survey of India, has given us for the first time an accurate knowledge of the drainage and structure of 55,000 square miles of country, an area approximately equal to that of England and Wales—and extending over some of the greatest mountains of the world, in three short years.

There is still one little blank left in the neighbourhood of our own boundary. It is almost international ground, for it adjoins the surveys of Godwin Austen in 1861, of Sir Martin Conway in 1892 ; of Guillardot, the Frenchman, and Eckenstein, Pfannl, and Ferber in 1902-1903 ; of the Duke of Abruzzi, the Italian, in 1909 ; of Longstaff, the same year : of the Workmans—Americans—in 1912, of the Italian, De Filippi, and of Wood of the Indian Survey in 1914 ; and of the Vissers, from the Netherlands, in 1925.

We have there a regular geographical siege in progress. This last " veiled corner " is terribly shy, but the unknown gap grows smaller with each fresh investment. In 1926 I was fortunate in breaking into the east of that gap. We made our way some distance down the unknown Shaks-gam Valley but found it blocked by a large glacier. A lake had formed behind it. We examined the snout, and found the ice hard pressed against the red marble cliffs of the Aghil Wall. We climbed the mountains east of the glacier and surveyed the northern wall of the Muztagh-Karakoram. And beyond the great Kyagar glacier we saw the unknown gap and the four wonderful giants of the range. We could have crossed the glacier. But it would have been a week's work. Our ponies could never have crossed and must have all perished. We therefore crossed the Aghil range, explored it and surveyed it. The area of this work is shown on the screen. It is into the Shaks-gam Valley, below our glacier block, that the Duke of Spoleto hopes to force an entry.

Though the actual gaps in our topographical knowledge are small, our maps are by no means the finished article, especially in high altitudes, and a vast amount remains to be done in all branches of knowledge and discovery. The main object of the recently formed Himalayan Club is the extension of knowledge of the Himalaya through literature, art, science and sport. There is an immense amount of information hidden in periodicals and reports that must be collected, and there is a still greater amount to be learnt from the mountains themselves. The Himalayan Club must co-ordinate and actively encourage the further exploration of the Himalaya in all branches of science.

COMMON FAULTS IN ORDER WRITING.

By

CAPTAIN O. G. BODY, D.S.O., R.A.

Good orders are generally short orders. If they are long and involved it generally means that there is something wrong somewhere. Certain types of order, *e.g.*, orders for a night operation, or orders for a deliberate attack, must necessarily enter into more detail than such orders as a march order or orders for attack in encounter battle. Even the latter type of order, however, may become complicated in the hands of an inexperienced officer.

I. FAILING TO REALIZE THAT THE ORDER SHOULD INCLUDE ONLY SUCH DETAIL AS IS NECESSARY FOR ALL RECIPIENTS TO KNOW.

Such portion of the orders to the artillery or orders regarding inter-communication, supply, transport, ammunition, medical, and other services of maintenance, as is necessary for all recipients of an operation order to know will be published either in the body of the operation order by the general staff branch, or, after co-ordination by that branch, by the branch concerned as a supplement to the operation order in the form of an instruction. Detailed orders to the artillery, engineers, signals, and services which it is unnecessary for all recipients of an operation order to know, will, after co-ordination by the general staff branch, be issued separately by the branch of the staff or the officer responsible for drafting them, to those immediately concerned.

Besides the operation order, other orders and instructions will be going out. In a divisional attack order, for example, besides the operation order issued by the general staff of the division, there may be an artillery plan issued by the C. R. A. Instructions to Royal Engineers issued by the C. R. E. Instructions to Signals issued by the C. S. O. Instructions to R. A. M. C. issued by the A. D. M. S. Consider for a moment the orders to the artillery which go out from a divisional headquarters. Certain orders will be included in the execution paragraph of the divisional operation order, and certain orders will be included in the artillery plan issued by the C. R. A. What should be included in each of these orders and where should the dividing line be drawn ?

The operation order should only include such matter as is essential to ensure co-operation of the artillery with the other arms, i.e., only such matter as is essential for all recipients to know. Orders which effect the artillery only will be the responsibility of the C. R. A., e.g., where and when the shell are going to fall is a matter which must be stated in the operation order. The bringing up of the ammunition, dumping, etc., is an affair which concerns the artillery only and is a matter for the C. R. A. to deal with in his artillery plan.

Take again the orders to the R. A. M. C. All units will be concerned with the location of the advanced dressing stations. The actual field ambulance units which open the advanced dressing stations will be detailed by the A. D. M. S. and need not necessarily be mentioned in the operation order. Similarly units will not normally be concerned with the location of the main dressing stations.

The removal of wounded from the A. D. S. to the M. D. S. is the responsibility of the R. A. M. C. If the actual field ambulance units which are to open the A. D. S., and the position of the M. D. S., etc., are all to go into the operation order, the orders become long and involved. Remember the C. R. A., C. R. E., C. S. O., A. D. M. S., etc., are commanders, and will be issuing orders of their own.

In drafting orders to formations, officers will understand better what to include, if they look upon an operation order as a "Co-operation" order. If more than one addressee is affected the matter must be included. As a rule, if only one addressee is affected, it is a matter which that addressee can arrange for himself, or should be the subject of a special message or order to that addressee. If in doubt as to whether a matter should go into an order or not, ask yourself the question "Is more than one addressee affected." If the answer is "yes", put it in the order. If the answer is "no", leave it out.

II.—COMMAND NOT PROPERLY ORGANIZED AND FUNCTIONS OF VARIOUS PROTECTIVE BODIES NOT UNDERSTOOD.

If the grouping or organization of the forces under command is complicated or unsuitable to the operation in hand, bad orders necessarily follow. This applies in particular to protective schemes, because in this type of scheme the candidate often has to detail the actual forces employed on various duties.

In schemes involving an approach march an exact knowledge of the employment of special mission cavalry, protective screen, advanced guard mounted troops, van guard, main guard, etc., is required : yet the results in examinations show that many candidates have not got their ideas clear regarding the functions of these various bodies. The most hardy annual of all in the way of an examination error is, failure to realise that troops which have been detailed to seize and hold cannot protect, i.e., a complete misunderstanding between a duty of special mission and a duty of protection. Good orders based on a misconception of this kind are impossible to write.

In rear guard schemes, the rear guard commander frequently fails to detail a definite rear party and commander—and difficulties at once ensue.

In flank guard schemes the same faults are often evident. It is impossible to write a good flank guard order unless F. S. R., Vol. II, Section 50 “Composition and action of a flank guard” is fully understood.

III.—ORDERS BASED ON AN INFANTRY PLAN ONLY.

A very common fault in attack, defence and outpost schemes.

“The object of an operation order is to bring about a course of action in accordance with the intention of the commander and with full co-operation between all arms and units.”

The frequency of the fault arises from the fact that a very large majority of officers presenting themselves for examinations are drawn from the infantry arm. This accounts for a natural tendency to omit orders to other arms altogether or to treat them too lightly. The infantry is certainly the most important arm, but separate and independent action by this arm cannot defeat the enemy.

A “One arm scheme” is an examination fault which is heavily penalized by the examiners. Candidates as a general rule, will do well to give greater prominence to the orders to artillery, tanks, machine guns, cavalry, R. E., R. A. F., etc. A good sound plan which ensures co-operation between the arms is what is required. The examiner wants to see some definite relation between the artillery plan and the infantry plan. In attack schemes for example, one often sees good sound orders to the infantry, and the artillery

orders dismissed by "The artillery will support the attack." The latter order to the artillery will seldom, if ever, suffice.

It is the sign of a weak candidate. In attack orders to the artillery, the operation order must ensure that the artillery is used offensively to prepare the way for the infantry either by some form of modified barrage or by concentrations on selected targets.

Similarly, cavalry must be dovetailed into the general scheme of attack, and their action must have some definite bearing on the completion of the commander's intention. Orders to them cannot be dismissed by saying. "The cavalry will support the right flank of the attack." They must be given more definite tasks.

IV.—INTENTION NOT CLEAR.

It is of course obvious that if a commander has not a clear intention in his mind, it is impossible for him to write a convincing order. Again, the order will fail to carry conviction, if the commander has failed to express his intention clearly and concisely in his intention paragraph. The main fault in stating intentions, however, is to make them too general, and to state an intention covering a period of time in excess of that covered in the method paragraph. Remember the caution "It is seldom necessary or advisable to look far ahead in stating intentions." In an instruction an intention covering several days' operations may be stated, but not so in an order. The following is a good example of an instance where great care is necessary in framing the intention paragraph.

A	X	Y	B
FORCE			FORCE
One Bde. Gp.		Z	
One Regt. Cav.			
One A. C. Coy.			

The force at A is effecting an approach march against a force located at B. There is a difficult and important defile at X, also a good position covering the defile at Y———Z. The passage of the defile is an operation in itself and the force commander's first anxiety.

The following intention was given in the Force Operation Order for the first day.

"The Force Commander intends to seize the defile at X in order to allow him liberty of action to debouch therefrom.

This looks innocent enough at first sight, but does it really express the Force Commander's intention ?

This intention is included in a Force order, so it would be understood that the Force was to be used for securing the defile. Again; is seizing the defile the Force Commander's intention ? No. The Force Commander's intention is, to pass through the defile and fight on the other side of it. The mounted troops should therefore gain contact and hold the enemy away from the exit of the defile so that the remainder can pass through. "Seizing" the defile does not in any way express the Force Commander's intention. The intention for the first day's operation would have been better expressed as follows. "The Force Mounted Troops will hold the enemy east of the line Y——Z so that the North Infantry Brigade and attached troops can debouch from the defile at X."

A very different story, and an intention which does not in any way hamper the initiative of the mounted troops. As long as the line Y——Z is secure, they can exploit any advantage they gain, and make contact as far east as possible—a most important point, as the general intention of the Force Commander is a vigorous offensive.

The above example has been quoted in order to show the great care which must be taken in framing the intention paragraph.

V.—ATTEMPTING TO EMBRACE TWO OPERATIONS IN ONE ORDER.

For each operation a distinct and separate order must be written. A formation may well be carrying out two distinct and separate operations, and because they cover the same period of time there is a tendency to write one order to cover them.

When forces are definitely detached from the parent formation, orders to detachments are frequently mixed in with the orders to the parent formation, and confusion is bound to arise. One operation, one order, is the rule which should seldom be departed from.

To take examples ;

A withdrawal in the face of the enemy. The instruction to the rear guard commander, now a detachment commander, must not be included in the general order for the withdrawal.

A relief overnight followed by an attack at dawn. The relief and the attack are two separate operations, and two separate orders should be written.

There is one general exception to this rule—in light operations. Night marches, night advances, and night attacks are classified in F. S. R. as distinct and separate operations, and yet one operation order is usually written to cover any combination of these operations which it may be decided to carry out during the night. If you are writing an order for a night advance and a night attack, make quite sure that your intention paragraph states clearly that you intend a night advance and night attack: and in your method paragraph complete the orders for the night advance before you start writing the order for the night attack. The order must show clearly that you are attempting to embrace two operations in one order.

VI.—FAILING TO MAKE USE OF INSTRUCTION AS WELL AS ORDERS.

Unless the conditions of time and place are definite, operation orders cannot be issued. If a commander wishes to make his intention clear to subordinate commanders beyond the period for which definite orders can be issued, then an instruction as well as an order must be written.

Officers responsible for controlling operations must decide therefore, whether the situation is best dealt with by—

1. Issuing an operation instruction only.
2. Issuing an operation instruction as well as an order.
3. Issuing an operation order only.

As a general rule officers are inclined to issue an operation order to cover every eventuality: and with larger formations, such as a brigade group or a division, the tendency is to get out an operation order overnight to cover the whole of the next twenty-four hours, in the hope that they will not have to issue another operation order during that period. Orders are often written to cover a period during which the reactions of the enemy cannot be foreseen or prejudged. Divisional and brigade staffs may well want to let subordinate formations know the intentions of their commander for a period of twenty-four hours ahead, but they need not necessarily issue an operation order to cover this period. Instructions as well as orders must be freely used. Divisional and brigade staffs would often do better to issue an order overnight to cover the immediate situation which may develop the next morning, and an instruction to cover a longer period, so that subordinates can act intelligently if orders fail to arrive, or to enable them to anticipate orders.

Operation orders are sometimes issued with instructions appended to delay putting them into execution until definite orders to act on them are received, *e.g.*, operation orders for an attack may be issued, and appended to the operation order, are instructions to the effect that "these orders will not be communicated lower than battalion commanders until definite orders are received to put them into execution." Such instructions issued with an operation order are very seldom warranted, and they generally indicate that orders have been written on a prejudged or predicted situation. Under such conditions the operation instruction is the best means of controlling the situation.

To issue a full operation order and state that "Zero hour will be communicated later" is another matter. Delay in communicating the hour of attack is often justified.

An operation instruction may often be sent as a form of warning order, *e.g.*, In a rearguard action, instructions in the event of withdrawal may be sent out, so that subordinates may anticipate orders, or be prepared to withdraw on a very brief message.

Operation instructions may be issued for two purposes,

1. Instructions used to indicate the general idea in the mind of the commander, when the situation is not sufficiently clear for him to give definite orders.
2. Instructions issued in conjunction with a certain operation order and amplifying it as regards details.

The Method paragraph of an operation order must only contain matter for definite action, and should never develop into "chat" about situations which may occur. It should not contain any suggestion as to the handling of troops, or exhortations that they should act with extreme vigour or with caution or any matter of that kind. If this kind of "chat" is necessary (and it may be with untrained troops, or for a special operation such as a night operation) it should be contained in an operation instruction written in amplification of the operation order.

VII.—FAILURE TO UNDERSTAND THE PRINCIPLE ON WHICH OBJECTIVES AND INTERMEDIATE OBJECTIVES ARE ALLOTTED.

F. S. R., Vol. I., Section 68, paras. 1 and 2 are seldom grasped by candidates and as a result constant confusion arises in orders.

“In encounter attack, owing to the lack of accurate information, it will generally only be possible and advisable for the commander of a formation to allot general and distant objectives leaving to the subordinate commanders the allotment of the intermediate objectives.”

“In the deliberate attack, when fuller information as to the enemy's defences are available, co-ordination by higher commanders may be best effected by allotting intermediate objectives.”

Every commander must give a definite objective to the next lowest formation, unit, or sub-unit, which he commands, but under conditions of deliberate attack he may have to give intermediate objectives with the object of co-ordinating the speed of the attacking formations and ensuring simplification and co-ordination of the artillery support. In the deliberate attack, fresh troops are usually passed through on a pre-arranged time-table; in encounter battle they are passed through when the attack appears to be losing its momentum.

The allotment of intermediate objectives must not be confused with the allotment of 1st and 2nd objectives, etc. You cannot allot 1st and 2nd objectives to the same formation or unit. 1st and 2nd objectives are allotted to different formations or units. Objectives and intermediate objectives are allotted to the same formation or unit. For example. An infantry brigade commander will allot objectives to his battalions. He may decide to attack with two battalions forward and two in reserve. If it is an encounter battle he may direct his leading battalions on to the objective he has been ordered to take, and put in his reserves as the occasion demands. In deliberate attack, however, he may detail his leading battalions to capture the line a—b and his reserve battalions to pass through and capture the line c—d, *i. e.*, the lines a—b and c—d become the 1st and 2nd objectives respectively for his brigade. Each line will be taken by a different unit. He may, however, wish to go further than this and co-ordinate the rate of advance of the two leading battalions and ensure that the leading companies are “leap-frogged” by the reserve companies on a particular line. He will then order an intermediate objective for the leading battalions.

We will consider the extreme case of a division attacking under difficult conditions of position warfare in which the movements of

the troops have to be co-ordinated accurately with a timed artillery programme. It is obvious that under these conditions you cannot have units leap-frogging and reorganizing entirely at times arranged by their unit commanders. The divisional commander may order,—

1st Objective.—The line A. B. C. to be captured by the 1st Infantry Brigade.

2nd Objective.—The line D. E. F. to be captured by the 2nd Infantry Brigade.

The divisional order may then go on to detail intermediate objectives for the 1st Infantry Brigade as follows.

“Intermediate objectives for the 1st Infantry Brigade are allotted as follows” : —

“Line H—I—J and K—L—M.”

i. e., the 1st Infantry Brigade will take its objective in three bounds and will use the intermediate objectives as lines on which to reorganize the attack and pass through fresh troops. The Brigade Commander will write his orders accordingly and use one of the intermediate objectives of the divisional order as the objective of his leading battalion or battalions. This may be represented diagrammatically as follows :—

ALLOTMENT OF OBJECTIVES IN DIVISIONAL ORDERS.

D—————E—————F

2nd objective of the division. To be captured by the 2nd Infantry Brigade. Probably no intermediate objectives allotted to this brigade as attack would now be becoming more open.

A—————B—————C

1st objective of the division. To be captured by the 1st Infantry Brigade.

K—————L—————M

Intermediate objective of the 1st Infantry Brigade.

H—————I—————J

Intermediate objective of the 1st Infantry Brigade.

—————STARTING LINE—————

ALLOTMENT OF OBJECTIVES IN BRIGADE ORDER, WRITTEN ON ABOVE DIVISIONAL ORDER.

A—————B—————C

2nd objective of 1st Infantry Brigade. To be captured by C and D Battalions.

K—————L—————M
1st objective of 1st Infantry Brigade. To be captured by A and B Battalions.

H—————I—————J
Intermediate objective of A and B battalions.

—————STARTING LINE—————

ALLOTMENT OF OBJECTIVES IN BATTALION ORDER, WRITTEN ON
ABOVE BRIGADE ORDER.

K—————L—————M
2nd objective of the battalion. To be captured by C and D companies.

H—————I—————J
1st objective of the battalion. To be captured by A and B companies.

—————STARTING LINE—————

Here we have an extreme case in which the divisional order has influenced the movement of the leading companies of the attacking battalions of one of the brigades.

The intermediate objective applies to the case in which the commander of a higher formation steps in and co-ordinates movements which normally speaking are the duty of his subordinate commanders to arrange.

VIII.—WEAK ORDERS TO THE ARTILLERY.

In operation orders dealing with attack the co-ordinated action of the two main arms, *i.e.*, the artillery and the infantry, must be assured. Orders often show weakness in the fact that the type of artillery support ordered is entirely unsuited to the type of infantry attack which is being staged.

In an attack order there are three general methods of artillery support which have to be considered.

1. To support by observed fire.
2. To support by concentrations on selected targets and localities (timed or lifting by observation).
3. To support by barrage fire.

During an attack a combination of all three methods may be used.

Observed fire is applicable to conditions of open warfare, affairs of van guards, advanced guards, etc., and to the later stages of an attack when things have gone too far for accurate timings.

Support by concentrations is the normal method of supporting an attack in encounter battle, when sufficient guns are not available to cover the whole front of attack. Fire in this instance must be concentrated.

Barrage fire is applicable to position warfare, and perhaps in very modified form to the opening stages of an attack in encounter battle.

From an artillery point of view there are two general methods by which an infantry attack proceeds—

1. The deliberate attack in which fresh infantry are passed through on a pre-arranged timed programme.
2. The encounter battle in which fresh troops are passed through when the attack appears to be losing its momentum.

The method of attack by which the infantry proceeds will govern the method of support which the artillery apply. If the infantry is proceeding by the encounter warfare method of putting in fresh troops, when the attack appears to be losing its momentum, an artillery barrage would be entirely unsuitable. The open warfare method, with infantry formations, units, and sub-units put in as the occasion demands, cannot be supported by barrage fire, except perhaps in the very modified form of a couple of lifts at the outset to get the infantry away from the starting line. Unless the infantry attack is moving to a timed programme, it stands to reason that the artillery fire cannot move to a timed programme. Open warfare attacks must be supported by concentrations on selected targets or by observed fire. The concentrations, however, may be timed, and they should act as pivots of manœuvre for the advancing infantry, but it must always be understood that the artillery will modify the timings by observations if such is advisable and can be arranged.

The main attack in open warfare may start by a modified barrage, proceed to timed concentrations, and finish with observed shooting. When a point in the attack is reached where infantry timings cannot be fairly accurately judged, then the artillery timed programme must also cease.

The artillery support of tank attacks also requires consideration. Barrage fire will not be suitable. Concentrations on selected targets will usually be found the best method. Tanks can pass between the concentrations, and deal with those posts which have escaped the artillery preparation.

In the defence it is usual to state in orders the locality in which the guns are situated. In the attack this is seldom stated, but in the defence things are different. The gun position area is an essential part of the general organization of the defensive position and should be known to all arms.

It is also advisable to give some indication of the main artillery observation zone, as it is important to allow all commanders to understand the general "lay-out" of the defences. The gunners will also want to know the killing area, *i.e.*, the line in front of which it is intended to stop the enemy, in order that they can sight their observation posts correctly.

In a defence order, therefore, the artillery sub-paragraph should clearly define the killing line, the line of observation, and the gun line or area.

IX.—THE OVER-ELABORATION OF ORDERS.

The indoor academic solution of tactical schemes leads to many bad habits in order writing, and the over-elaboration of orders is one of them. There is a tendency to insert many things in operation orders which automatically arrange themselves. Orders must be practical, and above all, must arrive in time for the recipient to make his arrangements for their execution. The fault of over-elaboration often arises from the anxiety of candidates to show the examiners that they have considered every eventuality, and have given a definite job of work to everybody, but this anxiety must not be allowed to draw the candidate into a confusion of details.

At the same time it must be admitted that in the examination room a certain amount of unreality exists, and candidates must acquire the habit of putting their best goods in the shop window. They must, however, cultivate the art of not doing this too obviously, and this art should never descend to entering into trivialities.

It must be remembered that all formations will have standing orders, and many details which would normally be included in them

often find their way into operation orders. This is particularly noticeable in mountain warfare schemes.

The following are examples to illustrate the fault of over-elaboration.

“ The Brigade Machine Gun Officer will co-ordinate the fire of the machine guns allotted for the defence of the outpost position.”

Of course he will. That is his normal duty.

“ The D. A. P. M. will arrange for the traffic control.”

The D. A. P. M. should be fully aware of this responsibility.

Orders for inter-unit liaison, such as battalions making contact at various points during the attack, are seldom warranted in operation orders, especially in mobile warfare. Units should make and keep contact with units on their flanks. That is part of their normal duties.

Details as to when or how often reports are to be submitted during an encounter operation should seldom be included. The importance of sending back information as soon as acquired should be fully appreciated, and should require no emphasis in orders. If runners are to be constantly sent back with negative information your inter-communication resources will soon be used up.

Officers of specialist arms are very inclined to over-elaborate the details of the order which apply to their particular arm. Signal officers for example, are very apt to overdo the inter-communication paragraph and include in it a lot of special matter which would normally be included in a special signals instruction to signal units.

THE EFFECT OF THE MACHINE GUN COMPANY ON THE TACTICAL HANDLING OF A BATTALION.

By

COL. A. H. C. KEARSEY, D.S.O., O.B.E.

Our object in battle is to bring superior numbers to bear at a decisive point to strike the enemy by a judicious combination of fire and movement. The crux, then, of the present situation, will be to obtain that desired superiority of bayonet strength for the assault of a position.

The total strength of three rifle companies will be 18 officers and 459 other ranks. From these numbers 48 must be deducted for handling and firing Lewis guns and 51 for the three headquarters of the three companies. In addition, deductions must be made for casualties during the advance and for sickness and previous casualties.

In three companies, then, we may not expect to average more than 300 men for the actual assault and of this number, some reserve must be kept in hand for exploiting success and for dealing with unforeseen eventualities. The front normally allotted to a battalion in defence and attack is about 1,000 yards for approximately 200 bayonets under present conditions.

These arguments equally apply to holding positions and for protective duties. To counterbalance, then, this reduction in rifle and bayonet strength the Machine Gun Company will have to be boldly used. The machine gun though not an arm by itself is, however, as a weapon, a powerful auxiliary to infantry and is well adapted for close co-operation.

Its co-operation will have to be closer than formerly but it must be limited by the following factors, *viz.*—

- (a) that it is less mobile than infantry,
- (b) that it must have transport to carry it for any distance,
- (c) that it takes up to ten minutes to come into and out of action in a carefully chosen and concealed position,
- (d) that it weighs with the tripod $84\frac{1}{2}$ lbs. and cannot be man-handled for long distances or keep up with infantry in a long advance under these conditions,

- (e) that it can only fight when it has halted and has come into action,
- (f) that it is most suited for dealing with an enemy in the open ; that it obtains and corrects its range by the actual observation of the strike of the bullet on the ground or by its effect on a target.

On the other hand, three men with each gun can develop fire power equal to sixteen men firing rapidly, so that, we shall be able to save casualties during the advance and enable the advancing troops to maintain their mobility by obtaining superiority of fire, if machine guns are boldly used to gain this fire supremacy. This must be the basis of the handling of machine guns in a battalion.

They can be the most valuable asset if they gain this fire supremacy. They will, then, add very considerably to the efficiency of a battalion in replacing a rifle company 153 strong with 8 Lewis guns. By having four machine gun sections it will be possible to carry out adequately the distribution of machine guns in depth in every operation as Forward, Supporting and Reserve guns.

With only eight guns in a battalion this has been difficult as a section is the smallest unit that can be adequately administered and commanded. There are three limbered G. S. wagons to each section for the carriage of guns, ammunition and spare parts. These three vehicles cannot be conveniently split up if the sections are subdivided.

Now in attack and defence it will be possible to have,

- (a) a section of four machine guns as forward guns to enable the leading infantry to advance and assault a position and to hold it during consolidation ;
- (b) a section of four guns as supporting guns for flank protection, to support and cover gaps in the forward units ;
- (c) two sections as a reserve of fire power in the hands of the commander.

Sections are self-contained units under an officer and now they act as a unit for self-protection and mutual support with the other sections.

In considering the tactical uses of the machine gun company, it has been found that the best ranges for a machine gun are from 500 to 1,500 yards. This fact helps in the distribution of the guns in

action and enables us to decide on placing sections in echelon approximately 500 yards apart. The guns should be distributed in depth and sections should be able to support one another as well as the infantry with which they are working.

In defence of a position the Machine Gun Company must be disposed in depth.

As regards the selection of the gun positions, we learn in our official Training Manuals, that, in order to fight on the defensive, it is essential to organize the fire plan so as to use artillery, machine gun and infantry fire in co-operation to the best advantage. Artillery fire plans, the siting of infantry defences, and erection of wire obstacles must be co-ordinated to force the enemy into the arcs of the machine gun fire.

These machine guns should be sited for direct fire in sections or sub-sections in positions from which they can bring fire to bear for at least 500 yards to their front. The siting of the defences must be so co-ordinated that with the machine gun fire plan a belt of fire can be formed in front of the position, with the intervening ground between positions covered by flanking fire. Machine guns should be sited behind ground affording concealment from the front and should be protected by the dispositions of the other troops.

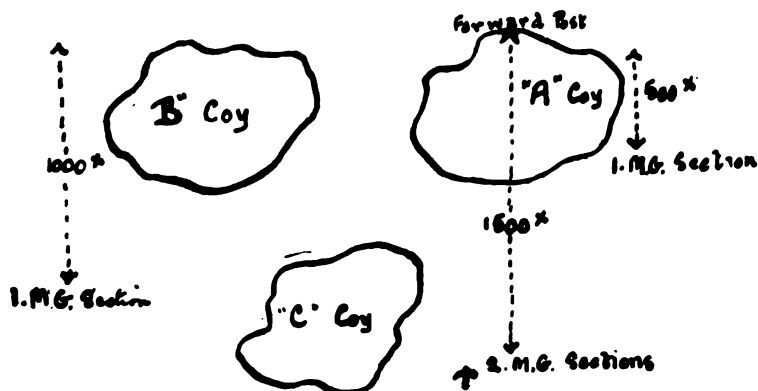
Towards the end of the War, when there was much artillery in action, Vickers guns could not be placed in the forward position. They could not exist in action when directly opposed by well-handled artillery.

They could only be kept in the forward positions as silent guns to produce concentrated fire at close range in the event of a sudden attack of the enemy. In this case only a very small proportion should be with the forward troops.

It must be remembered that machine guns take at least two minutes to move out of action and then their transport is less mobile than infantry, so that if they are not kept about 500 yards from the

forward infantry they may be involved in difficulties which will call for the assistance of infantry if they are not to be lost. Thus :—

Battalion in defensive position in mobile warfare.

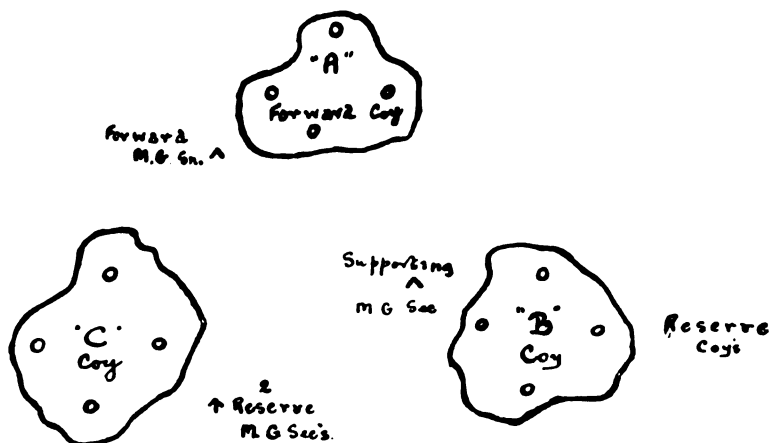


In defence, machine gunners should be careful not to disclose their guns in action. They should not open fire too early as that discloses prematurely the fire plan of the defence. They should cover the barrels which become shiny and should arrange for flash absorbers. They should site for direct fire and should take measures to ensure that indirect fire can be carried out on their chief lines for direct fire. They should arrange to have a few grenades with them to deal with enemy in dead ground close to their guns.

Arrangements should be made that they retain their mobility by having their transport, namely, 10 animals and 3 limbered G. S. wagons per section in the vicinity of their reserve guns. This will be necessary to deal quickly with a change of position required to support our counter-attacks or the enemy's attacks from an unexpected direction.

In the *attack* the machine guns must also be disposed in depth. The attack to-day is a methodical progression from one objective to an other.

For the capture of each of these objectives the machine guns must be available. Thus :—



o=1 platoon.

M. G. sections are approximately 500 yards in depth apart.

In this way machine guns will be disposed to cover the advance of attacking troops. They will successively advance by bounds so that they are always in the three Echelons as

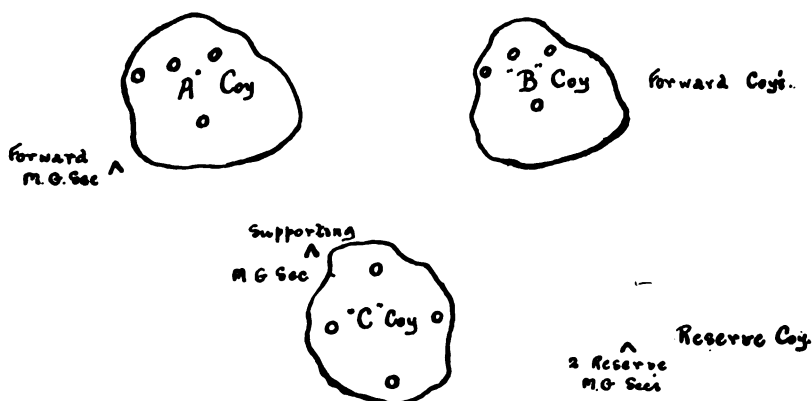
Forward,

Supporting.

Reserve guns.

They will be able to apply concentrated fire on localities checking the advance, they can protect the flanks and cover gaps between units, and deal with counter-attacks and help to hold successive objectives, and they are available to provide a reserve of fire power.

As the attack progresses they may be disposed thus:—



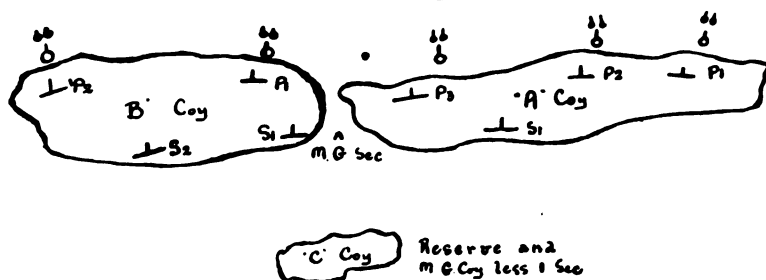
o=1 platoon.

On the completion of an attack complete sections will be available to cover with fire those at work on the consolidation of the captured position.

On outposts machine guns will be most usefully employed in sweeping approaches to the outpost position from the vicinity of the supports. The same principle being applied to the numbers used as for the infantry, namely, only to use $\frac{1}{2}$ in the forward positions.

As, now, normally two rifle companies will be forming the piquets and supports with one rifle company in reserve, the machine gun section on outpost duty will be of increasing importance. The remainder of the machine company will be required to arrange night lines for concentration of fire and to reconnoitre the ground in their front for positions from which to support the Forward Rifle Companies and Forward Machine Gun Section.

Battalion on Outpost.



1 P=Piquets.

1 S=Supports.

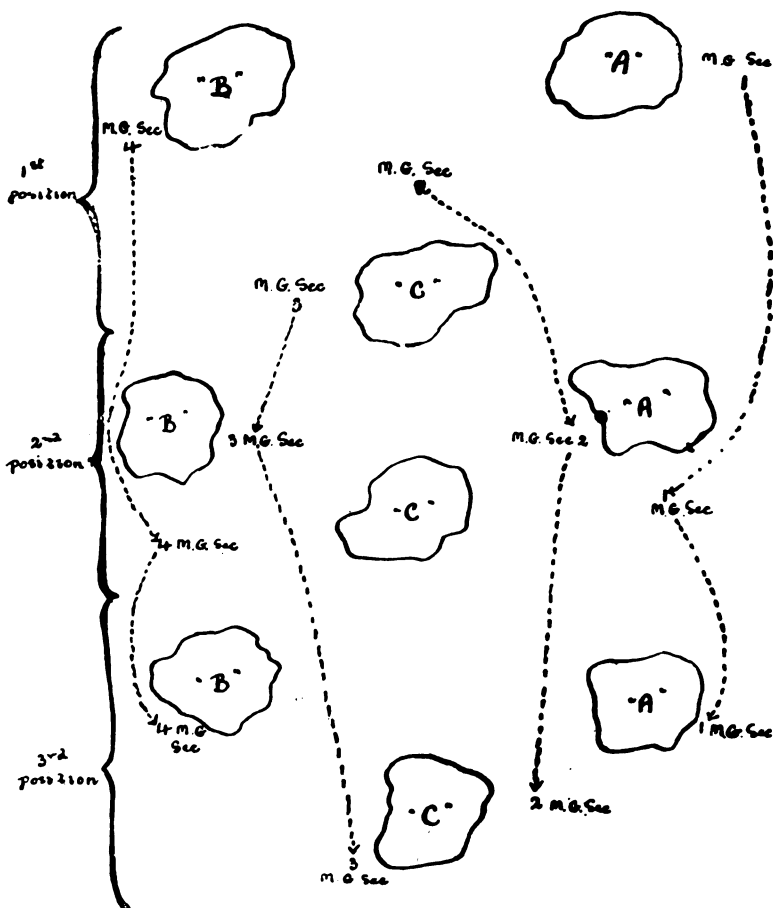
| o =Sentry group.

| o =Sentry.

In rear guard action the machine guns should be boldly disposed and handled. In order to replace the deficiency in bayonet power it will be essential to keep the enemy at a distance from the main rear guard position.

As ammunition supply is not the difficulty it is in an attack the machine gun should be sited for a long field of fire in order to open fire early and force the enemy to deploy, and, thereby, delay him to give the two rearward rifle companies time to make adequate arrangements for retreat.

They should be sited with a view to withdrawal near tracks and reconnaissance must be carried out so that they withdraw to definite and known positions, so that some guns are always in action while others are moving, and that they move successively from one position to another. Thus:—



In the advanced guard, in order to add to its offensive power a section may be allotted to the van guard company and it will march with the main body of the van guard. The remainder of the machine gun company can be disposed normally on the line of march behind the leading company of the main guard. They will thus gain protection and will be sufficiently far forward to support the van guard operations. Owing to the increased offensive power thus given to the advanced guard its commander will be able to carry out his role adequately of dealing vigorously with the first enemy encountered and will thus prevent the march of the main body from being delayed.

It must be noted, however, that the column on the line of march will be longer than when there were 4 rifle companies as each of the four sections will take up 65 yards of road space, that is, 260 yards for the company in place of 90 yards for a rifle company.

The increased fire power now in a battalion will be of considerable importance in adding to its security, mobility and offensive power.

Further improvements for the efficiency and security of a battalion will be to mechanize the machine gun company, in order to add to its mobility and striking power, and to add to it a section of half inch mechanically propelled anti-tank machine guns, capable of moving through 360 degrees in light bullet-proof armoured cross-country vehicles, each with a crew of two men, supported by a section of mobile self-propelled 18-pounder Birch guns with an all-round traverse.

VOCATIONAL TRAINING IN THE ARMY AT HOME.

By

LIEUT. W. G. I. M. ETHERINGTON, A.E.C.

PART I.

During the last twenty years several attempts have been made to introduce into the Army various forms of technical or vocational instruction. So long ago as 1910 for example, technical classes were formed in Malta. These were well conceived, and the early demand was great, but the scheme soon petered out for the inevitable lack of funds. It was not until after the war that opportunity came for this form of training to be undertaken on anything approaching a practical basis. During the demobilisation period, when large numbers of men had of necessity to be concentrated for lengthy periods under irksome conditions, the idea was conceived of forming trade classes, the trades selected being those for which machinery tools and material were most readily available, and the object primarily to occupy the minds of the men employed pending their demobilisation. When, however, demobilisation had become more or less an accomplished fact, there remained a residue of instructors, as well as of tools and material, and to this residue, thanks to the foresight of those responsible, the present Army Vocational Training Centres owe their being.

It is the aim of vocational training to teach time-expired men trades which will enable them to obtain and keep well paid and congenial employment in the open market. The need for such is evident.

The men come from three classes, irrespective of rank, *viz.* :—

- (a) those with 21 years' service and over,
- (b) those with 12 years' service, and
- (c) those going to the Army Reserve.

Firstly with regard to (a). The 21 years man, who is usually over 40, has assets which are second to none, *e.g.*, punctuality, discipline, civility and sobriety. He has also a fetish, and his fetish is that he, on his return to "civvy" life, requires a "position of trust". No matter what his qualifications may be for other and more lucrative employment, he has a most decided penchant for a "position of trust." And, after all, that is one job for which he is eminently well suited. It is in many respects a job similar in effect to that which he is leaving—regular place of employment, regular hours of work, and regular pay.

He is unsuited to the rough hurly-burly of the modern scramble for existence, he is growing old, and the work which younger men can perform with dexterity and ease, he finds difficult and irksome. He has a pension, and the regular wage attached to this form of employment satisfies his needs, and every effort is and should be made to secure for him work of this nature.

Now (b). The 12 years man, who is 30 years of age and upwards, is more adaptable. He is frequently the product of an orphanage, or an ex-boy. He has, in all probability never had to fend for himself, and knows scarcely anything of the world outside the Army. He therefore deserves special consideration when selections are being made. He is given every possible assistance at the Centres and many excellent tradesmen are produced from this category.

Finally (c). Those going to the Reserve, who may be as young as 21, have the advantage of youth and can be moulded more easily than the older men. On the other hand they often display an over-confidence in themselves and their ability which is detrimental to them.

Generally those students who attend the Centres are found to have had little or no experience in any of the trades prior to enlistment.

So much for the material, let us now turn our attention to the means at our disposal for dealing with the work of training this material.

There are at present three Centres in the United Kingdom,—Hounslow, Chisledon and Aldershot. Each Centre will be briefly described in turn.

Hounslow.—The Army Vocational Training Centre at Hounslow is situated on the historic Heath of the name, and is about 11 miles from Charing Cross. It is a permanent Hutments Camp designed originally to house a battalion of infantry and has accommodation for approximately 600 students. The present approved establishment of students is 375 and that of instructors variable, the policy followed being that no instructor deals with more than 15 students.

Students are attached for the period of the course and are borne on the Centre Pay List. They are returned to their units for discharge purposes as a general rule, although should this interfere in any way with the taking up of employment, special authority has been given for the discharge to be carried out at the Centre.

The general outline of administration is that the Centre is commanded by a Lieutenant-Colonel, Extra Regimentally Employed List, who is responsible for interior economy and technical training, with an adjutant seconded from his regiment for a period of three years, who is responsible for purely military administration pay, etc., and who also acts as quartermaster.

For training purposes the Centre is divided into two groups—Building and Engineering, each of which is controlled by a civilian Chief Instructor.

The Building Group comprises the following classes—

- Building Construction.
- Painting and Decorating.
- Plumbing.
- Bricklaying.
- Plastering.
- Handyman.
- Upholstery.
- French Polishing.

The Engineering Group deals with—

- Motor Repair Work.
- Fitting and Turning.
- Moulder's Work.
- Smithing.
- Acetylene Welding
- Electric Wiring.
- Coach painting and Spraying.

In addition to the foregoing, there are classes in—

- Bootrepair work.
- Private Service.

Arrangements are made to deal with men requiring positions of trust, knowledge of London, (Scotland Yard test for taxi drivers), as well as for men desirous of taking up technical courses at any of the London Institutes. These men are either given leave for the whole period of the course, or are accommodated at Hounslow whilst attending the course.

The Centre has large well equipped workshops which, as funds become available, are gradually being extended. Already a large spray painting shop has been built and an up to date plant installed capable of dealing with paint and cellulose spraying on the latest lines.

Acetylene welding, an expensive subject to teach, is undertaken to the extent that ten sets of apparatus may be, and usually are, in use simultaneously.

A large motor repair shop has been erected and equipped with all the modern appliances necessary for adequate instruction in motor repair work.

These buildings have been erected and plant, electric light, etc., installed by student labour out of funds accruing from production within the Centre.

Each class is in the charge of a civilian instructor who is a competent tradesman, and the system of training is such that so far as is practicable training and production are combined. Therefore the civilian instructor combines the function of teacher with that of foreman, and the student, as soon as he learns the use of the tools incidental to his trade, commences in some degree to perform a task which has a definite productive relation to the trade he has elected to follow. This holds his interest and goes a long way towards establishing that confidence which is so necessary to success.

Chisledon.—The Chisledon Centre is situated at Chisledon about 3 miles from Swindon. It is the old School of Military Administration to which has been added farmlands and buildings which go to make up a total area of over 1,000 acres.

The school buildings and barrack rooms are of semi-permanent type, splendidly laid out, with tarmac roads flanked with avenues of trees. Both roads and buildings are electrically lighted from the Centre's own power station.

The administrative staff, as at Hounslow, consists of a commandant and an adjutant and quartermaster.

At Chisledon the principle activity is farming, although in addition the following trades are taught—

Bricklaying.

Plastering.

Carpentry.

Painting and Decorating.

Plumbing.

Estate Handyman.

General Blacksmith.

Groundsman.

Training is organized in sections so designed as to ensure that students applying for assisted passages to the Dominions may be in a position to answer satisfactorily those questions demanded of them—"Can you manage heavy horses?" "Can you plough?" "Can you milk?" In addition to these bare minima, men for Overseas Settlement receive instruction in the following work—

(a) *Management of horses.*

Correct feeding and watering.

Grooming and bedding.

Correct adjustment of harness.

Management of single horses, pairs, triples, fours and eights.

(b) *Management of Farm Implements.*

Ploughs, single and double riding; harrows; cultivators; discs; horse hoes; force feed seed drills; root drills; reapers; tedders; rakes; binder stacking, thatching, threshing and grinding.

(c) *Dairy Work.*

Milking, cooling, separating and sterilizing.

Breeding.—Calf rearing, dehorning, castration and registration.

All men learn to milk, cool, separate and sterilize. Daily recording is maintained and charts are kept. There are at present 120 milkings per day by students. Breeding is organised so that experience in calving every week is assured.

(d) *Pig Farming.*

Open air—in woods, on waste land, on forage crops.

In-door—the Canadian Barn system is taught, using balanced rations varied according to market prices.

About 50 breeding sows are kept and farrowing proceeds all the year round. Correct attention at farrowing, rearing, castration and weaning are taught. Use of humane killer and pole axe, scalding, cutting up, manufacture of by-products (sausages, brawn, lard, etc.) bacon and ham curing.

Students prepare pigs for Shows and also attend local auction marts to gain a knowledge of buying and selling.

(e) *Poultry farming.*

Trap nesting, natural and artificial hatching and rearing by incubators and foster mothers. Rearing of ducks, geese and turkeys.

Killing, plucking and preparation for market.

Construction of coops, nest boxes, brooders and portable houses.

(f) Gardening.

Every man works a plot 1-10th of an acre for cropping in evenings and spare time. Much useful knowledge is assimilated by contact with the large productive gardens which are worked by students, other than those for Overseas, who are specializing in this work.

Budding, grafting and pruning of fruit trees forms a part of this course.

(g) Carpentry.

Rough carpentry is taught and consists largely of work on the lines of that described in a book "Makeshifts" published by the New Settlers League of Australia.

(h) Boot Repairing.

Classes are held two evenings a week, and the head of each family carries out all boot repairs for himself and his family during the six months at the Centre. Most men take out a supply of tools which they have bought gradually during their period of training.

At this Centre are whole families—the soldier, his wife and family—who in six months receive a course of training which makes it possible for them to proceed to the land of their adoption, Australia or Canada as the case may be, capable so far as the man is concerned, of handling teams of horses and using the agricultural implements peculiar to the country with as much dexterity as the old timer. He can fence and ditch, cold shoe, knows a little of smithing, can handle an axe, an adze and a hammer, and has learned to work all the hours that God sends. His wife can milk, separate, make butter and knows something of poultry and the ills to which they are heir. His children too, be they old enough. All this is possible for the reason that the instruction is in the hands of skilled agriculturalists, each a specialist in his branch. Two have been appointed recently who have had years of experience Overseas, the one in Australia, the other in Canada, each knowing intimately the districts to which the Groups from this Centre are allocated.

Aldershot.—This Centre is situated at Thornhill, Aldershot, and is conducted on somewhat different lines to either Hounslow or Chisle-don. Here students are not accommodated, but are drawn from units stationed in Aldershot. In special cases men from out-lying stations may attend and arrangements are then made for their attachment to an Aldershot Unit. It may be said that Aldershot is a sort of day school as compared with the boarding school status of Hounslow and Chisle-don.

The Commandant is also Chief Instructor and stores and material are controlled by a Quartermaster who is permanently appointed.

The following trades are catered for—

- Bricklaying.
- Plastering
- Carpentry.
- Painting and Decorating.
- Plumbing.
- Concrete Work.
- Builder's Draughtsman.
- Builder's Clerk.

This Centre is unique in that owing to its situation a considerable amount of building and work incidental to the building trades can be carried out without giving offence to the Building Trades Unions. Contracts are entered into with Military Departments for the erection of garages, sports pavilions, etc., and for the addition to and alteration of existing buildings, so that so far as the building trades are concerned students at Aldershot stand to get a more comprehensive and practical training than those at either of the other Centres.

PART II.

Vocational training ensures that a large proportion (80% is claimed) of its trainees go into civil life as wage earners, with never a need for the "dole". Fit and contented reservists are a national necessity and vocational training makes your reservist the fit and dependable soldier the emergency for which he may be required, demands. Vocational training attracts to the Colours a class of recruit which is above the average of intelligence. It removes the fear of the "blind-alley" and consequently men of higher intelligence become available to meet the ever-increasing demands of mechanization and modern warfare.

The figure of 80 % quoted above is obtained through the medium of an employment bureau. There is no central bureau co-ordinating the work of the three Centres, each has its own method, but at Hounslow every effort is made to obtain suitable employment for each individual student before he leaves the Centre. The bureau is in constant touch with the Ministry of Labour, with all the London stores, clubs, banks and kindred institutions, contractors and other large employers of labour, the Police Forces both Metropolitan and Provincial, in fact with every conceivable employment source in the country.

Most men not already placed spend their "fortnight pending" *i.e.*, the last fortnight of their service, armed with letters of introduction provided by the Employment Bureau, calling upon firms likely to require their services. In this way many men obtain employment, but often not until many letters have been proffered without result. It will be seen therefore, that only by the utmost effort on behalf of every individual that a measure of success is possible. A well organised Employment Bureau with an experienced and sympathetic (and this latter is absolutely essential) staff is as necessary to the successful running of a Vocational Training Centre, or indeed of any other form of vocational training, as the instructors themselves.

The following figures obtained at Hounslow during the last four years speak for themselves :—

1923-24	Total trained	231	Obtained employment	184
1924-25	"	403	"	327
1925-26	"	453	"	422
1926-27	"	500	"	473

Now it is obvious that there must be many difficulties to overcome and many unusual problems to solve in an undertaking of this description. Experience at Hounslow goes to shew that selection of students presents a formidable example of the difficulties experienced. That is to say the selection of the student material from which one or other of the Centres is ultimately to attempt to fashion the square peg to fit the square hole. It so often happens that the round peg is sent, and by the time something resembling a square has been fashioned, the material has disappeared. It may be that lack of method is at the root of the evil, but much can be done by the regimental officer to whom the man first broaches the subject of attending a Vocational Training Centre, but more by the officer who makes himself conversant

with the subject and breaches it to the man. It is well when considering an application to find out if possible the trade followed by the applicant's parent or relations. The influence of any one of these might make the difference between immediate employment and months of misery.

Men often apply for training in a trade which is absolutely unsuited to the locality in which they intend to settle. Here again it is essential to impress upon them the necessity for absolute frankness in this connection. It is a sheer waste of time and money to train a man as an acetylene welder, for example, if he insists upon settling in Slocum-on-Mud, or another as a gardener if he is determined to domicile himself in Seven Dials.

In the present state of the labour market no single point can be neglected which may in any way influence a possible employer to accept our man. There is a distinct tendency for men, particularly the short service men, to assume with their civilian clothing a slap-dash "don't-care-a-damn-I'm-out-of-the-Army-now" sort of attitude which the potential employer regards with suspicion and which often makes the difference between acceptance and rejection. Men should therefore be impressed with the fact that smartness, tidyness, cleanliness and courtesy are as very much an integral part of their equipment in civil life as in the Army.

Another great difficulty is money. Men should be encouraged to save systematically. When the time comes for them to get the job which means so much to them and their dependents, it would surprise many of them to know how invaluable that little nest-egg can be. Money is wanted for clothing, train fares, food and lodging, for tools, for all those hundred and one things that sort of just happen in the Service. Sometimes an excellent opportunity is missed, one of those opportunities that seldom come to the same man twice, because a fidelity guarantee is not forthcoming. Officers should therefore use all their influence to persuade the worthy man to provide for the future in this respect. It is the writer's opinion that the old system of deferred pay would be a happy resuscitation, but since it is not available, men *must* be encouraged to save for themselves. It has been pathetic on occasions in the past to receive applications for advances of pay from non-commissioned officers and men within a day or so of final discharge. Such advances are in reality loans, required to enable them to pay a

train fare of, perhaps, a few shillings, so that they might be enabled to interview a prospective employer.

Another point for the regimental officer is the need for care in the preparation of the Employment Sheet (A. F. B. 2066). When preparing the forms, which are, properly prepared, most useful documents, bring out, if applicable, such points as "total abstainer", "possesses ability to overcome unforeseen obstacles", "capable of working well without supervision", and if with initiative say so too. Also indicate plainly the sort of work the man can undertake.

In conclusion it is suggested that the men should be regarded from the very commencement of their service, not merely as so many civilians who are to be converted into fighting units, but also as so many potential civilians who ultimately shall return to civilian life improved, in every way by their military service. In sum, that the net result of their military-cum-vocational training will be a reservist or pensioner who is contented with his lot and proud of his association with the Army in which it has been his privilege to serve.

EARLY DAYS WITH THE EXPERIMENTAL ARMoured FORCE.

By

CAPTAIN A. B. KNIGHT, M. C.

With the reports now appearing in the press from Home, of the doings of the Armoured Force on the plain, it is perhaps a convenient moment to refresh our memories with Brigadier Collins' achievements during the first year of the Force's existence. Great things were achieved but the doctrine of trying to run before one can walk has perhaps seldom been better portrayed than with the Experimental Armoured Force, which was collected for the first time on Salisbury Plain last year.

Let us put ourselves in the position of a Staff Officer with the Force and endeavour to see developments through his eyes. For origin, the Force perhaps owed its inception as much to the writings of such well-known people as Colonel Fuller and Captain Lyddell-Hart and their effect on public opinion at Home, as anything else. Technical developments in cross-country machines happened to coincide with increased interest in these matters on the part of the General Staff at Home, with good results. To the soldier, the possibilities of this force were great and had excited enormous interest, though its protagonists in the press had perhaps over-reached themselves in the interests of word painting and spectacular journalism.

The effect on the public was however enormous, and throughout the operations last summer, special and elaborate arrangements were necessary to control the movements of spectators, and above all their private cars. Even with the aid of a special staff, police, enclosures and elaborate traffic precautions, together with secrecy on occasion, the hampering of operations by spectators could not be altogether avoided. First of all let us get the picture of the Experimental Mechanised Force into our minds, as it was first constituted.

Position in the Spring of 1926.

As we know, the first tanks appeared in France in 1916 and were used in ever-increasing numbers from then on to the end of the war. These early tanks were somewhat crude and though they were succeeded by later patterns, such as the Mark V and the Whippet,

the effect of the conditions in France and Flanders, together with the demand for more and yet more production was to keep design on tried lines. The results were that the first post-war tanks had advanced but little beyond their initial speed of about 5 m.p.h. and the necessity for a complete overhaul every 100 miles with a circuit of action of about 20 miles. But by the spring of 1926 the position was far different. With the advent of the New Sprung Track, the Armstrong Siddeley air-cooled engine and other kindred developments, the Vickers Light Tank had been born.

This had been gradually perfected over two or three years and gave the enormously increased performance of 15-20 m.p.h., for short sprints, a track life of about 1,800 miles and a radius of action of about 120 miles, though the armour had, of necessity, been cut down from that of the old type heavy tanks, which weighed anything up to 40 tons, to the Light Vickers Tank Mark II, weighing about 12 tons. Further experiment had developed the chassis of this machine into the Mark II Dragon, for the traction of guns, particularly medium artillery.

Certain other special war machines, such as the Wheel-cum-Track, and Hathi Four-Wheel-Drive were in the course of development. Aided by the Empire Cotton Growers' Association, the War Office had endeavoured to perfect M. Citroen's Trans-Sahara Kegresse $\frac{1}{2}$ -Track machine and had induced a number of makers at Home to take it up with a view to building up a reserve of cheap cross-country machines in the Empire. At the same time Colonel Martel was busy with the first experimental model of his 1-2 man tank, which was literally built by himself and his wife, in the garage of their house and from their own resources. But perhaps the vital factor was the R. A. S. C.'s development of the Renault 6-wheeler, and the enterprise of Mr. Morris in seeing its possibilities and actually producing his first experimental machine inside a month. This paved the way for the cheap cross-country commercial machine, on which one can truly say that the basis of mechanization rests.

March 1926, when Mr. Morris made his great decision, is perhaps the most important date in mechanisation, since the advent of the first tanks on the Somme some 10 years before. This development of machines progressed steadily during 1926, bringing more firms into

line on the manufacture of 6-wheelers. This type was the sole cross-country vehicle for which they could foresee any commercial use in sufficiently large numbers to offer a reasonable return on their necessarily very heavy initial expenditure in experiments, development, demonstrations and advertisement. All of these would be necessary before the public would take to the new machine, at any rate for use in England. Lloyd and Carden entered the field with a rival tankette to Major Martel, and the Italians showed us their Pavesi machines.

During the winter of 1927, the C.I.G.S. announced his intention of constituting an Experimental Mechanised Force on Salisbury Plain for the coming training season.

His plan was to use existing units as far as practicable to try out the possibilities of the new idea, and to get some inkling of the type of machines and organisation required to obtain the best value from an armoured force. Tactically, the basic idea was to substitute a tank battalion, in lieu of infantry, as the backbone of the force, and to allot such proportion of other arms to assist and support it, as would enable it to carry out the various rôles envisaged.

For the purpose of the initial year's operations, the force was precluded from fighting against other armoured forces, firstly, because other mechanised units were not conveniently available, and, secondly, because it was realised that there was more than enough to be learnt from action against normal formations during the first year's work. The administrative arrangements, which are perhaps more vital to the armoured force than to a normal formation, were fully investigated in Staff Exercises during the winter of 1927-28 and proved of absorbing interest ; as the force had by then, in theory, expanded to 500 fighting machines, which were found to require some 600 ancillary vehicles to keep them in the field.

Initial Organisation of the Armoured Force.

Brigadier R. J. Collins, C. M. G., D.S.O., whom many will remember as D. M. T. in India, was appointed to command the 7th Inf. Bde. and Mechanised Force, as it was then called. A Tank Corps Bde. Major and Staff Captain, who had also to cope with the usual area administration, comprised the staff, to which additional officers were attached from time to time. The backbone of the

organization was supplied by the 5th Bn., Royal Tank Corps, already stationed at Perham Down, and which was the first Bn. to be completely fitted out with the Mark II Vickers tank. 48 tanks organised into three companies with a special wireless section attached to the Bn. H.-Q. In addition, the 9th Field Brigade (Mech.) at Bulford, for the purpose of comparative trial, was equipped with Mark II dragons for two of its batteries, Crossley-Kegresse $\frac{1}{2}$ -trackers for the third, while the fourth battery was composed of the (then) new Birch gun. Five machines were allotted to each battery and the battery staffs were equipped with Crossley-Kegresse $\frac{1}{2}$ -track cars. The first line transport in either case was ordinary 4-wheeled light lorries, though pneumatic tyres gave them an enhanced cross-country performance. Both the above units were fully trained in the mechanization of their own arm and had had experience over several seasons, while their machines were either new or specially overhauled in preparation for the coming training.

The rest of the force was formed of extemporized units, or those hurriedly adapted to mechanisation; so much so that they were still completing their initial driving in instruction, etc., right through to divisional training. The splendid performance they put up with so little preparation speaks volumes for keenness and efficiency displayed by all ranks. The largest unit involved was the Somerset Light Infantry, who were equipped with Vickers guns, organised into three-section companies. (With one normal draft training company in reserve). Each section was a complete unit of four vehicles, one for the commander ($\frac{1}{2}$ -track car), one for each sub-section and one for reserve ammunition, etc. (All 30-cwt. Crossley-Kegresse $\frac{1}{2}$ -trackers). While the first line transport consisted of Morris 6-wheelers.

Colonel Martel was specially selected to command the 17th Field Company, R. E., more or less on the normal organisation of four sections, but fitted out with Morris and Guy 6-wheelers and special bridging equipment. For this training season, however, recourse had to be made to solid tyred three ton lorries for dragging pontoons, which were borrowed when necessary. It was intended to equip the 9th Light Battery with $\frac{1}{2}$ -trackers, but these did not materialise, and, for divisional training, some Karrier medium 6-wheelers were hired, and the 3·7" hows. and crews just bundled into them.

A special signal organisation was formed embodying various wireless sets mounted in 6-wheelers, (all of the w't variety) and a large number of motorcycle dispatch riders. Line and visual transmission sections were cut out from this organisation. To begin with, the wireless sets were just ordinary patterns put into Morris 6-wheelers, but later the special tank sets, at the rate of one per Coy. or Bn. H. Q., became available. These were intended to be armoured and mounted on a tank chassis.

The 2nd Bn., The Cheshire Regiment was also available at Tidworth and, though not officially belonging to the Mechanised Force, had been mechanised as far as its M. Gs. and first line transport were concerned ; so that it only required busses for the four companies, each of which were comprised of four L. G. platoons, to render this unit fully mobile for work with the Mechanised Force. The organisation of the light reconnaissance machines presented certain difficulties. The first idea was the issue of the only tankettes available, viz., 8 Morris-Martels and 8 Lloyd-Cardens to the 5th Bn., R. T. C. and to bring up the 12th A. C. Company from the training school at Bovington, comprising two sections of Rolls cars ; the remaining section being on the Rhine.

But in spite of their larger establishment of spare crews, the 5th Bn., R. T. C. found that looking after their own tanks gave them a very full time occupation.

The need for more scouting and reconnaissance machines was apparent immediately the force was organised.

Above all the organisation, training and possible employment of this Light Group offered such scope that a separate commander could well be employed. Before Bde. Training commenced therefore the 3rd Bn., R. T. C. came down to Tidworth to take over the Light Group, comprising Bn. H. Q. and two companies, one of which came fully equipped as an A. C. Coy. with twelve Rolls Royce cars ; while the personnel of the other was brought down to operate the 16 tankettes, which were taken over from the 5th Bn., R. T. C. The 12th A. C. Company was also detailed to come into their organisation. This now comprised :—

H.-Q.

2 Cys. A. Cs.

1 Coy. tankettes.

The Preliminary Training of the Force.

This presented a large number of difficulties as the different arms of the service comprising the force had gradually evolved their own systems, even for the most rudimentary things, such as the ordinary hand signals for road control. Thus everything had to be organised from the start. Brigadier Collins took over on the first of May, and, issued the first preliminary standing orders to the force before the 8th of June. They included such elementary matters as road intervals, the definition of a section as 4-6 vehicles, methods of inter-communication, etc. But, perhaps most important of all, they divided the force up into three groups, on a potential speed basis and allotted a normal rate of march to each.

Normal Rate of March.

Fast Group.—A. Cs. less transport 25 *m. p. h.*

Medium Group.—Light battery.

Field Coys.

Inf. Bns. (Mech.).

M. G. Bns.

A. C. Coy., transport.

Transport lorries 10 *m. p. h.*

Slow Group.—Field brigades.

Tank battalions.

Tankettes .. 7 *m p. h.*

Normal Day's March.

Fast group 100 miles.
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Medium group 50 „
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Slow group 30 „
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These provided disturbing factors for a theoretically homogeneous force, as was apparent throughout the season's operations. They were, however, forced willy-nilly on the commander by the limitations of the various types of machine involved. During this period, the newly mechanized units were training, assisted by dribblets of machines which were delivered to them from time to time. At the same time the Tank Bn. and the gunners were busy "running in" their newest machines and bringing their new drafts of recruits up to the scratch.

The Summer Training in 1927.

Owing to the enormous amount of groundwork to be done by the staff and the backward state of training of the various units newly mechanised, the outings of the force were practically confined to official demonstrations given to the Staff College, the Secretary of State for War and officers on leave from India and to a test march for the tanks. There followed the $\frac{1}{2}$ dozen schemes during Brigade and Divisional Training and finally the Grand Southern Command operations extending over some 72 hrs. of fighting.

There were to have been further operations against the first and second Aldershot Divisions, then training in the Oxford Area, but the heavy rain in the Thames Valley brought these to an abrupt end before the Mechanised Force had left Tidworth on what was to have been a surprise attack ; the secret of which had been very well kept.

During the whole of the early training new ideas were being continually born and scrapped the very same day, as practical experience proved them to be valueless. The fact that it takes a full three years to efficiently train a new unit to mechanisation has now been fully recognised at Home, and will always be allowed for in the time-table when practicable. It does also help the manufacturer who cannot produce non-standard vehicles in large consignments at a time.

The provision of spares is also a considerable problem and it is obviously better to have fewer machines with the necessary spare parts, than more with none. This problem is not, however, as easy as it seems, owing to the lack of stability in design of various types. Ordnance, having been led to manufacture large quantities of spares for the earlier types of tanks, which were left on their hands, are now doubly careful before they let themselves in for other "white elephants." Further, the actual parts of new types of machine are constantly being improved upon, so that what may be perfectly good spares today, are useless tomorrow. Thus, the result seen at Tidworth last summer, of expensive machines, particularly of the $\frac{1}{2}$ -track and tankette types, lying idle for three months or more at a time, was not so avoidable as it appeared. In any case it serves to point the moral against redundancy in types of machine.

The Difficulties of Design.

One of the difficulties of the present stage of mechanisation is to find sufficient fixed foundations on which to build up a sound organisation and tactical doctrine. A tank designer is like a naval constructor, perhaps always a cynic, dreaming in the future amidst a maze of conflicting ideas and knowing that each creation of his hand and brain will be out of date almost before it sees the light of day. Even with such a comparatively simple machine as a motor car, for which all the data are known, he will be lucky if a successful machine materialises inside three years.

For a cross-country vehicle, the problems in dynamics of which are only now being solved, construction is much more difficult; coupled as it is with tactical performance, armour and armament capacity, and the limits set by rail-load gauges, bridge limits and climatic factors. Take the ordinary routine through which a new armoured fighting vehicle is evolved. The demand for a machine for some new tactical purpose arises and is conveyed to the requisite authorities in the War Office. If sanctioned, the project is turned over to one of the special committees, who perhaps take three months to come to an agreed specification. The machine is then rough drawn, taking at least two months, with a third month for checking the drawings.

A wooden "Mock-Up" is built, taking a month to see that there has been no slip between the various departments concerned, and for the tactical people to see what sort of hybrid their idea has germinated into. This takes one month. Alterations are probably required, taking say two months and then the machine is finally drawn in detail taking at least a further couple of months, a total of twelve months in all. But further, the performance of a cross-country machine for most parts of the world is so affected by the season of the year, that adequate data cannot be obtained under a full twelve months' field trial. Thus we have arrived at a full three years before the first production of the new type can be ordered in quantity, much less delivered to the troops.

Perhaps some of us have been unfortunate enough to buy a motor car in the first year of its new model production and have regretted the matter considerably. The manufacturer on the other hand, has quickly spotted his errors and produced a thoroughly good machine

for the next season's sales. But the unfortunate tank designer seldom gets a second chance, except with the semi-commercial types, as, tactically, his machine will be too obsolete to warrant further expenditure in time and labour.

The 5 ton bridge.

Let us follow these difficulties in practice with the Armoured Force. In the early spring of 1927, a new bridging policy was brought out and received the unanimous consent of those in a position to know. We will call it the Three Bridge Policy, as it laid down that the bridge with the army in the field, would be :—

(a) *Light Kapok Floats.*

For infantry assault bridges, etc.

(b) *The Medium Bridge-Open Steel pontoons.*

For all the forward elements, giving a maximum load of 5 tons.

(c) *The Heavy Bridge-Closed Consuta pontoons.*

Which could take up to 27 tons or the independent tank. This has pontoons placed side by side, solid, right across the river. Note the novelty of the idea, the old rule that passages must be left between piers, has now completely gone by the board.

This 5 ton bridge fetish caused an immediate demand for the production of light armoured fighting vehicles weighing under that figure and put most of the current types out of court. In vain the designers protested that it was not practicable to produce such a machine and that it would be lacking in all the vital factors of performance and protection. The bridging question being of such vital importance, Brigadier Collins picked on a river crossing as the first tactical problem to be investigated. This took the form of a demonstration of the crossing of the R. Avon and took place just over a year ago. The Staff College were invited to see it.

Colonel Martel, having diverted his brain temporarily from the designing of tankettes, had various of his ideas for trial, such as—

The Tankette Raft of Kapok floats.

His Stepping Stone Bridge.

For full-trackers over shallow streams and

His new Ribbon Bridge.

For light machines.

And last, but by no means least he was prepared to show what the 17th Field Coy. could do with heavy bridging material.

It was a really good drizzly greasy day, typical of the Plain, and though few troops were used, it was of absorbing interest to the Mech. Force Staff as the very first occasion any portion of the force had been out of barracks together. From the very start problems cropped up. Slight cavalry opposition had to be driven in and in the initial advance across-country from Tidworth, the proportion of light reconnaissance machines was plainly inadequate. Who was to do the R. E., reconnaissance, and how.? The Morris 6-wheeler car is too large and unarmoured, while the motor-cycle was obviously out of court. Eventually Major Martel was given a tankette of his own brand to try his hand with.

Let us envisage the scene. After the first wave of covering tankettes the spectators were perhaps most impressed by the rush forward of the O. C., Mech. Force, with his Commanding Officers to his advanced H.-Q.

It was a most grotesque mechanised point-to-point, with all kinds of beasties scurrying across the Plain. The Morris 6-wheeled cars and wireless tender obviously obtained the first places, being followed at a distance by the $\frac{1}{2}$ -track cars and further back still by panting tanks and tankettes. The rear was brought up by some half dozen unfortunate officers condemned to ride motor-cycles, who were having the ride of their lives, not in any way assisted by the fighting order equipment they carried, or the "Battle Bowlers" which kept slipping over their eyes; for you don't loose your hands from the bars of a motor-cycle going across-country. A £ 10,000 tank is hardly the machine from which a company commander should carry out a discreet reconnaissance of his proposed line of advance. There was obviously much to learn.

But to get down to the river, who was to do the initial covering and who to launch the Kapok floats to get the first parties across? The guns were in difficulties, as the Avon Valley is so steep that you cannot drop a shell into it, except from some way back or down by the water's edge, neither of which suited the Field Brigade, and though tanks could be put down the forward slopes and give good covering fire, they would be considerably at the mercy of enemy guns on the far bank of the river, way back in concealed positions, where Mech. Force guns couldn't get at them.

Most of the manual strength of the 17th Field Company was required for bringing down the heavy bridge and only advisers could be spared to assist in the launching of the Kapok floats. There was no other solution than to temporarily dismount a company of the Somersets and to wish for more tankettes to assist in giving covering fire. Thus early we see the demand for a proportion of infantry with the force.

The crossing of the Somersets, as infantry, was quickly followed by a Morris 6-wheeler which rushed a large built-up Kapok float down to the river, to get the first tankette across. This was a somewhat hair-raising proceeding, as the tankette barely fits the raft, and getting on and off the banks is the real difficulty. The first Carden-Lloyd met disaster, owing to the mistake of a sapper in placing the gang plank under wheel instead of track, and the Morris-Martel that followed did not look any too secure.

They then tried the Stepping Stone Bridge, which resembles a string of hurdles on box-frames, dragged across the river, on which it was shewn that a Vickers tank could cross the shallow water of the Avon. The cream of the performance came with the great Consuta wood pontoons which now came slithering down to the river, on the old pontoon waggons, dragged by 3 ton solid tyred lorries. There were 26 tons of bridging material to handle and yet, inside 70 minutes, the 17th Field Coy. had completed a three span heavy bridge across the Avon and by putting a quadruple pier of covered Consuta pontoons between each span, could easily take a load of 16 tons.

This quite confounded the protagonists of the 5 ton bridge and proved that any normal A. F. V. could be used with forward formations, not to mention the medium 6-wheeler, which the 5 ton limit had put out of court. This great step forward took some time to bring itself to the notice of all the powers concerned. And some of the latest experimental machines now seeing the light of day, are severely crippled as to performance and characteristics owing to their having been designed under the cloud of the 5 ton bridge fetish.

But to get back to the river, the crossing of first elements was still hazardous and though Colonel Martel's Ribbon bridge, then shewn for the first time, was obviously capable of carrying light machines like the Morris 6-wheeler, it was difficult to adapt for heavier loads. But it is a wonderful invention, just a light bearing surface, assembled

from sections and pushed boldly across the river without any floats or supports of any kind. It is only for light motor vehicles, which must be well spaced out and kept moving at a speed of about 12 m.p.h., as the weight of the machine is entirely borne by the 'impact' of the roadway on the surface of the river, which it can only sustain for matter of seconds. A further advantage is that the 'ribbon' is just strong enough to support men, well dispersed, so that the preliminary crossing of a detachment to the far bank can be avoided.

For the initial rush though, something is required that will get across under its own steam without exposing men to the fire of the enemy.

Technically, the problem is by no means insuperable if use is made of floats, which can normally be carried on separate vehicles behind and fitted in a few minutes when required. This has been proved by Colonel Martel's experiments with the amphibious 6-wheeler and various amphibious machines now in use, while the size of the floats is not unreasonable up to a limit of about 15 tons. It so happens that the latest tendencies towards machines of the six-wheel-drive type help the river crossing problem considerably, as, given the initial water speed of about 10 knots, their noses will be driven sufficiently far out of the water to get a grip and so pull themselves out by any ordinary cattle dip along the banks of a river.

The Gun v. Armour Contest.

The tactics and organisation of the Armoured Force are naturally subservient to this never-ending struggle, between gun and armour—as naval design has been since the invention of ironclads. And, though, for the moment, the tank *v.* field gun situation appears fairly stable, in that any field gun shell of 15 lbs. and upwards will hold a tank with a direct hit, while the field gun's shield is not proof against the tank's guns, there are changes in the air. Firstly, the standard of tank gunnery is improving rapidly and with the new tanks fitted with turret mounted weapons, fire can be directed with great accuracy and control on targets at any angle to their line of advance. This had not been possible with some of the present patterns.

Covering fire has now been organized and any A. T. weapon, once unmasked, must be expected to shift to another position before it can open up again.. The spectacle of a horse battery galloping into

action against tanks on a forward slope is now out of place except within a gilt frame.

Though A. P. bullets are not suited for prolonged firing from the ordinary infantryman's rifle, there is nothing to prevent his carrying a couple of clips of these cartridges in a special pouch to slip in when an enemy A. F. V. comes in sight. It does, however, require a brave man to use it, as the shock of discharge is considerable, and he will have to hold his fire till the target is within something like 150 yards.

This devastating news did not filter down to the Mechanized Force till right on in divisional training; all the preliminary training being based on the successful use of a cloud of light armoured machines, such as the then tankettes, for the purposes of reconnaissance, etc. This new idea puts the fully armoured, really light machine out of court and brings the minimum cost of a true fighting vehicle up to several thousand pounds, and a weight of several tons.

The myriads of tankettes, costing a couple of hundred pounds apiece, which the prophets had foretold, are thus ruled out. Special cartridge clips are to be issued to the Third Division, in their training this summer, to represent this new A. P. bullet. The effect of these developments are far-reaching as the A. F. Vs. of many nations do not carry sufficient armour, according to these new standards, while many post-war machines are not bullet-proof. This increase in the thickness of armour affects the infantryman from yet another angle, in that, it is now no longer practicable to produce an infantry A. T. weapon which can be handled off its motor-carrier, whatever form that may eventually take. This renders the provision of A. T. weapons more difficult on the grounds of expense, while being of larger size they will be more difficult to conceal. Again, this means that light machines cannot be armoured all-over, and though you can attempt to armour the man or the engine, it is a very moot point as to which is the most desirable of the two; strong protagonists are to be found for both ideas.

By armouring the man you encourage him to go closer to the enemy than he otherwise might, but he is at the mercy of a bullet through his engine. But if you armour the vital parts of the chassis, some other man from the crew can still carry on in the event of the driver being disabled. Actually the present tendency at Home, is to try out the absolutely unarmoured vehicle and to cut its size and weight in every

possible way. Colonel Martel is trying out his mechanical horse, based on an Austin 7 chassis. A number of the new midget cars, such as the Austin, Triumph, Jowett, etc., are also under trial. Each of which carries two men and a light automatic. Four men can lift them through a hedge with the aid of the special handles provided and experiments are being made with a view to giving them a better cross-country performance, which, with the aid of enormous balloon tyres, is already quite good. One of the most favoured machines, is the Austin 7, with Gordon-England sports two-seater body, so small that it is very easy to conceal. From the viewpoint of mobilization and the utilization of standard tyres, this new tendency is excellent, and we have noticed the ubiquitous Mr. Morris's recent advent into this field.

Marching with the Mechanised Force.

We have all heard of the wonderful mobility of the Mechanised Force and how it can be expected to do an easy 120 miles a day, but I wonder how far those who claim this speed have seriously considered the difficulties of the achievement.

In these days of long range action from the air, even when out of contact with the enemy a peaceful march must be extremely rare. In order to handle the Armoured Force to the best advantage tactically, it was obviously necessary to ascertain what, in actual practice its power of mobility was. This Brigadier Collins set himself to do, as soon as the various new units were sufficiently trained to leave the vicinity of their barracks. The first test took the form of a 30 mile march by a company of light Vickers tanks, under peace conditions. Brigadier Collins formed part of the crew of one tank, while other officers of Mech. Force Staff, who did not belong to the R. T. C., were distributed up and down the column. The last tank was specially fitted out by the medical authorities for testing the interior fumes, etc. Everything was done to ease the travelling for the crews of the tanks, doors were kept open, and a number of the men were accommodated on folded tarpaulins on the roof, with special ropes for them to hang on by.

From the very start we began to learn. The First Aid lorries, 4-wheelers, stuck and had to be sent home, while the Brigadier's 6-wheeler Morris car was obviously too big to try passing a swinging-

swaying tank on a narrow country road. To the unaccustomed, the noise is terrible and the jolting most unpleasant. Several quite unexpected yet vital points kept cropping up. Firstly the light tank engine, though an 8-cylinder, is amazingly difficult to start, and after a standard 10 minutes halt it was no exception to see a section fail to get away together, even after 5 or more minutes delay, and have to leave one or more tanks behind to catch up later. This difficulty was not eased by the problem of inducing tanks to pass in a narrow lane. In practice, the idea of passing by crashing through the hedge is not always feasible; even if it were permitted under peace conditions, for most hedges are studded with trees and the ordinary roadside ditch seldom invites a tank to take it diagonally. But it is the pace that tells and after 15 to 20 miles most of the tanks were in trouble over their steering brakes.

A tank steers by braking one track or the other with an enlarged version of the ordinary motor car brake, fitted with a friction lining. This lining runs hot if overworked and besides failing to grip, fills the inside of the tank with poisonous and very noxious fumes, while in some cases the lining does in fact catch fire. Very unpleasant for the crew and worse for the average speed of a march, as in bad cases halts are necessary for cooling. Brake slips lead to accidents and may necessitate 'luffing' round corners. This will give you an idea as to why, now and again, a tank crashes into a shop window or slithers into a ditch. On a 30 mile run, therefore, with short halts, the average hour's run of a bare 6 miles is all that can be expected with the present types.

So much for the march of a unit, from which much had been learnt. But the first two schemes of Brigade Training brought further light to bear on the difficulties of practice, and took the form of a 30 mile peace march by day, followed by a 30 mile peace march by night, about 8 miles of both being across country. The country was soaking wet and the A. Cs. had to be left in barracks, thus again bringing out the necessity of eliminating all vehicles from the force, which were not capable of the cross-country performance of the 6-wheeler.

Treated as a normal formation, the road space tables were worked out and timings allotted to units, but even then mistakes occurred at the start owing to Unit H.-Q. vehicles not being easily identifiable.

Early Days with the Experimental Armoured Force.

The idea of marching at regular intervals proved impracticable, as it meant that vehicles travelled continuously on their lower gears, overheated their engines and used too much petrol. For this reason the new practice of allowing units to concertina inside their own areas came into force, though it makes it very difficult for the commander to judge his distance. The idea is that going down hill, or on the level, the head of each unit slows down and the tail closes up. On approaching a hill each vehicle accelerates in turn and takes the hill at its best speed, making full use of its weight and momentum in its climb.

Road blocks, whether caused by traffic, breakdown or enemy action, are a frequent cause of delay and annoyance, and great initiative is required from all subordinate commanders to lessen their effects. The officer on the spot must immediately decide on the action required or select a way round. You merely know that the vehicle in front has halted. No one knows why or whether it is in touch with the rear of the rest of the column, or whether even on the right road. It is for this reason that such stress is laid in Mech. Force standing orders, on the 'ticking off' of each cross road passed, on the section commanders' map. But it takes time to get the information down to section commanders and many unforeseen circumstances may cause the route to be changed at the last moment. This again brings out the high standard of training initiative and judgment required from the men of the Armoured Force.

During this first day's march aeroplane attacks were brought off on two occasions, the targets being selected off the map by R. A. F. representatives. The best show was in a deep cutting where a flight of S. S. Fs. summoned by the patrolling reconnaissance plane, put in a most effective attack, flying so low that their approach was completely concealed by the intervening ridge. As then equipped, Mech. Force columns, first the Medium and then the Heavy, could do little against them. The Birch gun is unsuitable for shooting at aircraft immediately overhead and the crew is considerably exposed to their fire. A. A. Lewis guns were not sufficiently allowed for in the organisation of the force at that time; though for the Divisional Training an old type A. A. battery was added which had also its section of A. A. Lewis guns. The Air Force were further utilized to photograph the columns and to determine the degree of camouflage necessary.

In this, a number of curious incidents occurred, for while the canvas cabs of some new Morris 6-wheelers were plainly visible, the Somerset's half-trackers displayed their position most when empty, and their bench type seats and bright radiators acted as reflectors. Once from 3,000 ft., a plane mistook the whole Bn. of tanks for a supply dump, though the one camouflaged tank proved difficult to find.

The night march was most instructive. Road running presents little difficulty, though details of equipment can be improved. For instance, a dim blue tail light, to borrow from the navy's experience, is far preferable to the standard red glow the manufacturer provides and to avoid accidents a tail light has proved necessary. This demands a design which affords full concealment from the enemy and at the same time protects the lamp, that is, by boxing it in at the rear of the vehicle.

The possibilities of driving across country in the dark have to be seen to be believed. With a column closed up, the lights of the leading vehicle are more than enough, and it is impossible from a distance to tell, except by the noise, whether one or more vehicles are approaching. For this sort of work the slow rolling full-tracker is obviously in clover and the motorcycle at its worst.

Intercommunication and Control.

Perhaps one of the most difficult problems was that of intercommunication and control. The essence of such a mobile and powerful weapon as the Armoured Force, being to make full use of its capacity to strike hard and take advantages of fleeting opportunities, as and when they occur. This is no easy matter, when speed of decision and execution are essential, while dealing with a group of columns moving at different speeds and spread out over miles of country. Here Wireless and the Air are of the greatest assistance, though proximity to the enemy may render their use inexpedient, if not actually dangerous.

Imagine the scene. The medium column is motoring quietly along the road, headed by the O. C. in his X-country car, followed a few yards behind by a couple of motorcyclists.

And behind that again, a big R. A. F. Crossley 6-wheeler, aerals up, the whole show doing an even 10-15 m. p. h., while away in the distance the drone of the covering aeroplane may be heard.

Take an actual instance. The O. C., Medium Column, asks his adjutant. "Where is the head of the Slow Column now?" The adjutant writes his message and pins it in a special baton-clip, all without stopping, a motorcyclist comes along side and drops back to the radio-telephone tender, which 'Speaks' to the plane.

Within four minutes of having spoken, the information is back in the O. C.'s hands, all without slowing for a moment.

But up and down the column the problem is not so easy. A car is too large and the motorcycle gives the officer, solo, too much to do to ride it, while it is a poor performer across country.

Yet so far the motorcycle wins, owing to its unique gift of turning straight round in an 18 ft. road, without blocking the column in any way, while it can pass a swinging tank with ease.

As the Germans found necessary before the War, a special communication vehicle will be required.

They solved the 1914 problem of long columns of marching infantry, by a tandem 2-seater motorcar, driver in front and one officer behind.

But the new problem is different, affected as it is by the minimum cross-country performance factor, and the necessary capability of turning rapidly in an 18 ft. road, carrying a double stream of motor traffic without checking either.

Still we live and learn, wireless tenders will no longer fold their aerials forward to catch in every tree, and the new coding devices, coupled with the use of a naval code, may permit more use to be made of wireless, in the proximity of the enemy, than has been the case so far.

Should however, a 'Wireless Silence' be ordered, the question of inter-communication between the various moving columns is not easy, especially under weather conditions when planes cannot take the air.

Motorcycle despatch riders are obviously too vulnerable to be used in hostile country, and this means that armoured cars must of necessity be earmarked for what inter-communication the Air cannot affect; obviously a wasteful method, for which no easy solution is as yet apparent on the horizon.

The Desirability of a Uniform Speed.

Early experience with 'road blocks' soon taught the advisability of sticking to the main roads, as far as practicable, even though this involved more mileage.

But, by doing so, the Force arrived sooner at its destination, and in a less harassed condition. And though there are prophets who talk glibly about the Armoured Force motoring straight across country, it will usually be found making the best use of its mobility, on the best road available.

And what is the mobility of the Armoured Force? At Tidworth we have seen armoured cars do 38 miles in 52 minutes, and the necessity of gaining ground towards the enemy, together with the seizing of bridges and other important points, will always necessitate a proportion of really speedy vehicles with the Force. These high speeds, however, are only possible for small numbers of isolated vehicles, which must take great risks.

In an exercise without troops, distinguished soldiers have moved the Mechanized Force some 120 miles in a night, as an ordinary manoeuvre, but is it likely to occur in practice? Let us rather judge the potentialities of the Mechanised Force by what it has actually achieved to date, in the way of mobility, and we shall be standing on firmer ground.

Last year at Tidworth, the Force was sadly crippled by the necessity of running in three columns, owing to the varying maximum speeds of machines. As we saw on several occasions, the Slow Group experienced great difficulty in beating 6 m. p. h., while the standard of 10 m. p. h. for the Medium Group was seldom achieved.

But let us look further, what is the goal towards which we aim, and by what standard shall we judge?

The basis of mechanisation is the semi-commercial vehicle that can be picked up in large numbers from civil life on mobilisation.

The X-country 6-wheeler appears to adequately fill this bill. Here we have a robust road machine, with quite a good X-country performance. On the road it will average 20 m. p. h., in small numbers, and can be whacked up to some 35 m. p. h. for short distances.

We can assume that in company it will average 15 m. p. h., and let those, with recent experience of attending the Derby by car, estimate as to whether this speed is ever likely to be exceeded, by a heterogeneous force of some eleven hundred vehicles, even when unmolested by the enemy.

Let us then assume this 15 m. p. h., to be the practical limit of speed which the Force, as a whole, is ever likely to achieve, with our present knowledge and conditions.

On one occasion last year, at a critical moment, the tanks and dragons were some 6 hours behind, while on more than one occasion was the Force seriously delayed, by some normal 4-wheeled vehicle which stuck in a narrow lane.

This serves to point the moral that the 6-wheeler is the machine by which the Force must be judged, and that all types which have not the road and X-country performance of the standard 6-wheeler, must be sternly eliminated from the Armoured Brigade, whatever their other claims and qualifications may be.

Summary of Points to Date.

The Mechanized Force has achieved a great deal more than appeared possible in the first year of its existence, though there is yet much to learn.

Perhaps the main point is that infantry will always be required for assisting in bridging, protection at night, guarding prisoners, dumps, etc.

As to mobility, the Mech. Force has not yet achieved 10 m. p. h., while 15 m. p. h. appears to be the limit of its possibilities. And it has yet to prove that it is faster than cavalry in the presence of enemy opposition.

For the future considerable reorganization is obviously necessary, even from the experience gained in the past year's work.

Finally, it is obvious that it is the character and capacity of the commander and the man that is even more vital than before.

SOME NOTES ON AIR MATTERS AFFECTING INDIA.

By

SQUADRON LEADER E. J. HODSOLL, R. A. F.

INTRODUCTION.

The development of the air has been so marked and continuous of recent years that the problems confronting any country, from a defence point of view, must change with alarming rapidity. A constant watch on the situation is necessary. India has filled the rôle of interested spectator for several years, but there are signs that she is proposing to take a more active part in the world of aeronautics, and it is hoped that the following notes may be of general interest, mainly from a military point of view, but also to some extent from a civil aspect. A selection of some of the more important subjects will be discussed.

1.—THE SITUATION IN THE MEDITERRANEAN.

At first sight this subject may seem to be somewhat irrelevant: a closer examination will show, however, that it is a matter of intimate concern to the Indian Empire.

When the German High Seas Fleet surrendered to Admiral of the Fleet Lord Beatty after the Armistice and subsequently committed suicide at Scapa Flow, the whole strategical situation underwent a violent convulsion. For reasons that are too well-known and too obvious to need reiteration, the centre of interest shifted to the Mediterranean and the Far East. The disposition of the capital ships of the Royal Navy was accordingly altered, and the main battle fleet is now located in the Mediterranean. The Mediterranean is the high road to India from England, Europe and America.

But Great Britain and the Empire are not the only parties interested in this narrow sea.

France, by reason of her North African colonies and their potential reserves of fighting men—so vital to her army—has a very large stake in the claim; Italy also, by reason of her lack of raw materials, her overseas colonies, and her need for expansion, is just as interested.

The Mediterranean has, in fact, become the cockpit of Europe.

There is one aspect of this problem which the British Empire cannot regard with complacency ; the aerial situation in this area. It has been an axiom that command of the sea is essential to the maintenance of overseas trade in war ; it is no exaggeration to say that command of the sea alone in the Mediterranean will no longer suffice to keep open and maintain this vital link in our communications. Command of the air is also necessary. How do we stand in this respect ?

We have an aircraft base at Malta, we have aircraft carriers attached to the Mediterranean Fleet, and we have aircraft in Egypt and Palestine. Malta is within easy striking distance by air of Italian territory : Syria adjoins Palestine. What of the two other countries most intimately concerned ?

The French Assistant Military Attaché, at a lecture at the R. U. S. I. in 1926, discussing the problem of the North African colonies as a reserve of man power in war, and the question of transportation across the Mediterranean, stated that :—

“ The cheap and sure weapons, in our estimation ” that is, for ensuring the safe conduct of these forces “ are mainly the submarine and the aeroplane, assisted by a certain number of very fast cruisers.”

It may not be out of place to note here that the total establishment of first line aircraft in France, Syria, and North Africa is estimated at 1,434 machines, with a war reserve of 1,400 machines. The French are building up a network of commercial air lines in the Mediterranean, which means the establishment of bases at convenient spots : Corsica especially being regarded as of considerable importance.

A study of the map will show very clearly that aircraft, operating from bases in the French Midi and North Africa, bases sheltered from naval bombardment, might command a large area of the Western Mediterranean.

Italy, as the frequent speeches of the Duce testify, is trying to build up a large air force and is rapidly opening up new bases in Italy and Sicily and also in Tripoli. She can, in the same way, exercise command over a large stretch of the middle and eastern portions of the Mediterranean.

In this connection, the recent cruise of 60 Italian flying boats in the Mediterranean is not without interest.

Therefore this situation confronts us : if we were at war, despite our preponderance in naval strength our lines of communication between England and India *via* the Mediterranean, both sea and air, might be subjected to complete or partial interruption. Then we should have to use the Cape route, with all its inconvenience of greater distance and longer time. And so it will be realized that India's interest in the air situation in the Mediterranean is a vital one.

A natural corollary to this is the importance of establishing airship bases in India and Africa. Supposing such a situation as has been suggested were to materialize : India would be cut off from communication with England, to a very serious extent, at a time when quick communication might be vital. If an airship service were running, a vast saving in time could be effected, even though the Mediterranean route were closed, by using airships on a route across Central Africa and on up to India. Should this prove impracticable, an airship service *via* Cape Town would be infinitely faster than the all sea route. Even a service *via* Canada, Hongkong and Singapore would save time on the older and slower methods of transport.

As the capacity of airships improves, so will it be possible to reinforce India with aeroplanes and to a certain extent with troops, even though the Mediterranean be closed.

It will be seen, therefore, that the airship route to India *via* the Cape might be of vital importance quite apart from the commercial possibilities, which, considering the number of Indians in British Africa, must in all probability be considerable.

It will be argued that if we were at war it is conceivable that no airship would be safe in passing over Europe, this may be quite true, and it is perhaps equally important to develop the air route *via* Canada and the Far East, since such a route would be practically immune from interference by hostile aircraft.

The converse of this situation is quite conceivable. Supposing India was required to assist the mother country at a time when reinforcements could not proceed *via* the Mediterranean, then the proposed airship routes, would again be of equal value.

Quite apart, then, from the point of the view of the easier and quicker commercial exchange in peace time, there is or may be, a very real necessity for the establishment of airship services in war time when other forms of communication have been interrupted or rendered too hazardous for use.

2.—THE FLYING BOAT OR SEAPLANE IN INDIA.

India has a coast line of some 4,000 miles : on this coast are various ports which are of the utmost importance to India, for a variety of reasons which are too obvious to need repetition here. These ports are defended ports : i. e., a number of personnel and a certain amount of coast artillery are maintained for their defence. Such defences are costly and are, in the main, more unproductive than most kinds of military expenditure.

Against what are these defences maintained ? presumably against aggression by sea. And what form is such aggression likely to take ? The naval base nearest to India is, or will be, Singapore ; Aden may be included also, in its character of a refuelling station. Both these places belong to the British Empire. What then have we to fear ? An attack by enemy raiders, such as occurred at Madras during the Great War. There is a certain definite risk.

India, with her vast coast line, appears to offer considerable scope for the use of the seaplane or flying boat. There are certain areas of coast line which are generally unsuitable for the operation of land planes, but which are perfectly suitable for the operation of sea aircraft. The stretch from Bombay to Karachi is perhaps the best example. Modern seaplanes and flying boats can carry torpedoes, so also can aeroplanes. The latter are more unsuitable for coastal work through their inability to land on the water and remain afloat.

The chief objection to fixed armaments, such as are normally installed at defended ports, is their immobility and their inability to defend any other part of the coast but that in the immediate vicinity of the port. A further point is that a large capital outlay is necessary to instal these armaments and that in due course they become obsolete. Frequently, because the capital outlay is so heavy, port armaments have to remain obsolete for many years.

It is suggested that it might be feasible to reduce the heavy armaments at these defended ports, substituting flying boats or seaplanes carrying torpedoes ; such craft could be used in peace time for the operation of coastal commercial services. The very rapid power of concentration which aircraft possess would reduce the risk of having any port undefended on the outbreak of war, and concentration could normally be made before war was actually declared. These aircraft would patrol certain large areas continuously during the hours of daylight—and darkness as well—and it would be almost impossible for any hostile vessel to approach within striking distance undetected. In fact the risk would be less than it is at present.

The great point about employing the suggested mobile armament for coast defence is that practically the whole coast can be protected, and that any given danger spot can be reinforced rapidly by all or a part of the total strength. With the ordinary fixed armament this is naturally impossible.

If this proposal were adopted, it is claimed that it would result in considerable economies, and would turn part of India's defences into a commercial proposition in peace time.

It will be pointed out that monsoon conditions may make parts of this scheme impossible : it is agreed that difficulties may arise because of weather conditions, but with the improvements in the design of aircraft and in the art of flying, those conditions can be and are being overcome.

3.—AIRCRAFT AND THE ROYAL INDIAN MARINE.

The Royal Indian Marine has recently been reorganized and at the outset is to consist of a small number of sloops and patrol vessels. Its rôle is to assist the Royal Navy in the defence of India which means, in effect, that it will undertake patrol duties in the vicinity of the Indian coast. As has been pointed out already, the coast line of India and Burma measures some 4,000 miles and for its protection it relies on certain coast defences and on the East Indies Squadron, to whose upkeep an annual contribution is made. To this is to be added the small forces quoted above.

The East Indies Squadron has a vast area to guard and cannot be in more than one, or at the most two, places at the same time, if there is a risk of meeting an enemy in any

strength. Even if the squadron were dispersed, the area to be covered is so vast as to allow much margin to an enemy raider. For practical purposes and considering the possible enemy opposition the forces are adequate, provided that they can contrive to meet the enemy. This is always a doubtful proposition when the area to be watched is considered in relation to the capabilities of modern cruiser-submarines or fast raiders.

This preamble leads up to the point that there is no question but that aircraft would be of inestimable value in helping to—

- (1) Cover the area to be patrolled.
- (2) Attack the enemy if encountered.

The radius of action of vessels would be very greatly increased and the general offensive capabilities of the forces enhanced.

The light cruisers of the East Indies Squadron carry one machine each, but this is not enough. It is suggested that it would be both economical and practical for one or more small aircraft carriers to be added to the strength of the Royal Indian Marine at an early date : it is not suggested for one moment that a carrier of the type at present used in the Royal Navy should be purchased. For one thing the cost would be prohibitive, for another it is considered that these huge floating aircraft depots are only a transitory stage in the development of this type of craft. Their disadvantages are enormous. The latest United States Navy carrier is reported to have cost £ 9,000,000. Too many aircraft are locked up in one sinkable unit. We suggest one or two small and fast aircraft carriers, with an establishment of 6 or 12 machines. Such vessels would be reasonably economical to build and would, it is claimed, be of much greater value in the defence of India's coast than the present forces. The machines could be either aeroplanes or seaplanes and a proportion at least should be capable of carrying a torpedo.

It is suggested that a country like India, which has a vast burden of military expenditure to shoulder no very great naval peril to face, and is not justified in maintaining a large navy as well as an army, would do well to consider the advantages of small aircraft carriers.

The small aircraft carrier, such as has been pictured, is yet to be designed, but there do not appear to be any insuperable difficulties

in its construction. The main features should be a reasonable speed—about 25 knots—and an armament sufficiently strong to deal effectively with any armed raiders likely to be encountered. India's needs are in some ways peculiar ; it is against all principles to turn out freak vessels if it can be avoided, but an aircraft carrier on the lines that have been suggested should prove a very serviceable vessel for Dominion navies generally. Most of our Dominions and Protectorates possess a sea-coast and are faced with a limited military budget. At the same time they must make provision for local and coast defence, although the capital ships of the Royal Navy will ensure, to the best of their ability, immunity from attack on a large scale. The small aircraft carrier appears to be very suitable and economical from all points of view and will greatly increase the area that can be kept constantly under watch. In this way one of the gravest defects in the present type of patrol vessel will be remedied—small radius of action and limited offensive capabilities.

4.—THE EVOLUTION OF AIR POWER IN FRONTIER POLICY.

The Royal Air Force has been responsible for the security of Iraq for the last six years, and looking back over the events which have happened it cannot but be acknowledged that the experiment has been highly successful and economical. Just recently it has been decided to extend this principle of air control to the Protectorate of Aden, so that it appears that the Cabinet of the Imperial Parliament is gaining confidence in the capabilities of its newest service. The question naturally arises then, as to where else the Royal Air Force can assume the major responsibility for defence within the Empire, with the corresponding reduction in expenditure which is so desirable.

The North-West Frontier of India comes naturally to the mind, and it is proposed to give brief consideration to the possibilities of this situation.

The examples of Iraq and Aden have been quoted : in the first place, then, let us try to draw a comparison.

The kingdom of Iraq is a mandated territory : in other words we are holding it in trust for the League of Nations, until such time as that body considers that the kingdom is sufficiently developed to stand on its own legs. Then what is our responsibility ? Firstly, to maintain law and order within Iraqi borders

and to repel any attempts at external aggression or encroachment. Secondly, to assist in the economic development of the country. Thirdly, to train the inhabitants of that country to govern, defend and look after themselves. Fourthly, to establish some form of reasonable and popular government.

The first and most important factor in the development of the country is the security of peace, both within and without. The next, the establishment of economic stability. But since Iraq is only a mandated territory, and at present a very poor one (financially) the problem is difficult and is not one of such intimate concern to the British Empire : in other words, the impetus for development must come from the Iraqi himself, we cannot impose it on him, we can only help him to the best of our ability. Our primary aim is the maintenance of law and order, in the most economical way possible, and the giving of every assistance to the economic development of the country. We want to enable the Iraq Government to take over from us the entire control of Iraq territory in the shortest possible time. Whether such a solution is ultimately practicable is outside the scope of these notes.

Aden is a British Protectorate. It is a vital part of the British Empire, as it is one of the defended links in the chain of Empire communications with the Far East. Aden consists of a British garrison and Residency jammed together at the foot of a precipitous rock, and a vast hinterland inhabited by semi-civilized tribes. Since we are responsible for the safety of these tribes and are morally bound to protect them from aggression, the use of air power is readily understandable : the terrain in the hinterland is inhospitable, to put it mildly, and the garrison, as it existed, formed a holding force for the actual port of Aden rather than a police force exercising control over the whole area.

In any case the Aden Protectorate cannot be called either a fertile or desirable locality : its interest to us, as has been stated, lies in its location on the Imperial lines of communication.

Now we come to the North West Frontier.

In the first place this area is a definite part of the Indian Empire and therefore of the British Empire. In the second place, speaking of the territory across the Administrative Border, the North-West Frontier consists of wild and mountainous country. It

is with difficulty that a precarious livelihood can be extracted from the barren hillsides. The inhabitants of this tract of country are warlike and independent, a natural result of the conditions under which they live. But bordering on these mountain fastnesses are fertile valleys and plains : with a population containing many prosperous elements. In fact there is every inducement to the hardy liver to live at the expense of his more prosperous neighbour.

It is obviously to the peace of the cis-administrative border dweller that his more pugnacious neighbour should be persuaded to live a less warlike existence. This means that we must try to introduce civilization where none exists.

How is this being done ? By the building of roads and the general facilitating of intercourse between the plains and the mountains. Since the mountains are economically unproductive, it is to the interest of the mountain dweller to stake out a claim in the plains, and if communication is easy he will do this.

Briefly, the policy of the Government of India in their efforts to pacify the Frontier is to civilize it by facilitating safe inter-communication between the hills and the plains.

It has been well said that civilization is marked by three stages. First the missionary, second the road, third the railway. On the North-West Frontier this dictum might be modified to read : first the soldier, second the road,—perhaps third will be the aeroplane, who knows ? Where do the Air Force come in, then ?

When you begin to build roads through a country inhabited by a wild and warlike people, even though they are nominally your subjects, you have got to protect the road builders. This is generally done by (a) local protection, (b) a mobile garrison located in some fairly central tactical spot. It is difficult to see how aircraft can be used as substitutes for the protective parties on the ground in this early stage of the proceedings.

However the Air Force has its uses. In the first place punitive operations can be carried out far more economically and far quicker by aircraft than by the older methods, and it is becoming generally recognized that in cases of tribal disturbance necessitating military action the Air Force shall be employed first.

Secondly, as the civilization of the Frontier progresses and the roads are completed, there is hope that the necessity for some of the garrisons in tribal territory will disappear : the system of Khas-sadar posts will be extended, and the present system of local tribal protection expanded. Such a system, though it has proved excellent, requires a backing of regular armed forces, and here it is thought that the Air Force will be adequate. Regular patrols can be made on an extended scale, as is done on a small scale now, to see that the protective posts are occupied and that all is well. Any trouble or difficulties, at any place, can be swiftly dealt with by aircraft. Political officers can sometimes accompany these patrols, and landings can be made at places like Wana and Razmak, and other grounds which it may be possible to construct. In this way, necessity for maintaining garrisons may gradually disappear in this part of the country ; the whole area could then be organised in a net work of landing grounds linked up by air communications.

This process must necessarily be slow and, as has been shown, it is in a somewhat different category to the problems confronting us in Iraq and Aden. But though slow it is on the lines that have already proved successful, and when the road-making schemes are completed it is thought that a gradual increase in Air Force responsibility, more or less, in the rôle of policemen, will come about.

5.—THE NORTH EAST FRONTIER.

While on this subject, a short note on the North East Frontier may be of interest.

Here the problem is in a very different category. In the first place the terrain is such as to make an attack on India from this quarter, in any force, practically impossible. There are hardly any roads of any kind, the country is dense forest and very sparsely populated. The neighbouring country is that extreme eastern province of China, Yunnan. The likelihood of aggression from this quarter in any force is, in consequence, unlikely, and the most that is to be feared is the infiltration of Soviet agents should China go "red" at any time. There must always remain certain needs from the internal security point of view.

From a flying aspect the conditions are not generally very favourable ; meteorological conditions are extremely severe and at the present time, in certain parts of the country, about five months

out of the twelve are very unsuitable for flying because of the rains.

Landing grounds are difficult to site and are equally difficult to keep serviceable while the rainy season lasts. The "dry belt" is the only part of Burma where the flying conditions approach to the normal.

The country is covered with dense vegetation and observation from the air is liable to be very restricted.

All these difficulties of ground movement due to the lack of roads and other communications, make it especially desirable that the country should be opened up to aircraft, for if any military action is required the difficulties confronting the operations of ground forces will be very great, as the history of the Burma expeditions will show. And although flying conditions are difficult, there is no doubt but that the difficulties can be overcome. Experiments are being made to see whether it will be possible to make swampy landing grounds serviceable at all times, by putting tarmac on the surfaces. We hear that such an experiment has been carried out with success in America, and there would not appear to be any vital objection to the scheme provided that the tail skids of aeroplanes can be suitably modified to stand the extra strain.

The heart of Burma can actually be reached from India, by air, by either of two routes. One going down the coast to Rangoon and thence north to Mandalay, the other and more direct route crossing over the Naga Hills.

Burma, then, for the reasons set out above, is not such a potentially suitable place for the eventual assumption of air control, as is the North West Frontier; but it is necessary that Burma should be linked up by air route to India and that internal air routes should be laid out in the country itself. As the interior is developed and conditions become more favourable, so can the influence of the air be increased. It is possible that civil aviation may help to open up the country also and provide swift communications between important centres at present entailing long and laborious journeys, mostly by river.

With Burma then, as with the North West Frontier, though the process may be infinitely slower, it is believed that ultimately there will be scope for an extended system of air control and for the development of civil aviation generally.

MILITARY NOTES.

ABYSSINIA.

The Lake Tsana Dam Question.

A brief summary of the facts in connection with this question may be of interest.

1. Object of the Dam.

Only about one-fiftieth of the water which flows *via* the Blue Nile into Egypt comes from Lake Tsana, a fact that has caused some people to suppose that the damming of the Lake would be useless, and that all the bother over it is unnecessary. Actually the dam, by increasing the storage capacity of the Lake, would enable the flow of the river to be regulated sufficiently to avoid dangerous floods in wet seasons, and to make up the deficiencies of any dry seasons, while the lower and slightly increased range of levels would tend to decrease the area of swamps and render the district through which the river flows more healthy.

2. Outline of the negotiations.

Negotiations with the Abyssinian Government for the construction of this dam started as long ago as 1902, when, in an exchange of Notes with His Majesty's Government, the Emperor Menelik made the formal statement :—" That there is to be no interference with the waters of the Blue Nile and Lake Tsana except in consultation with H. B. M's. Government and the Government of Sudan ; that in case of any such interference, all other conditions being equal, preference will be given to the proposals of H. B. M's. Government and the Government of Sudan, and that His Majesty, the Emperor Menelik, has no intention of giving any concessions with regard to the Blue Nile and Lake Tsana except to H. B. M. and the Government of Sudan, or one of their subjects.

This agreement was incorporated into the treaty signed on 15th May, 1902, delimiting the frontier between Abyssinia and the Sudan. This treaty is the bedrock upon which the whole question rests.

In 1906 a tripartite agreement was signed between Great Britain, France and Italy, under which the signatories agreed to maintain the political and territorial *status quo* in Abyssinia, and to abstain from

all interference in her internal affairs. The three Governments further agreed "To safeguard the interests of Great Britain and Egypt in the Nile Basin, more especially as regard the regulation of the waters of that river and its tributaries, without prejudice to Italian interests." These Italian interests related to Italy's desire to construct a railway joining Italian Somaliland and Eritrea. After the conclusion of this agreement the illness, and subsequent death in 1913, of the Emperor Menelik prevented the negotiation for the dam coming to any definite conclusion, and matters dragged on until in 1925 the British and Italian Governments, by an exchange of Notes, undertook to support each other in respect of the Lake Tsana project and the construction of the Italian railway respectively. The contents of these Notes, when communicated to the Abyssinian Government, were misunderstood by them, and they at once became filled with apprehension that Great Britain and Italy were conspiring to divide the country between them. As the result they appealed to the League of Nations, which replied that the matter did not seem to come under their jurisdiction.

3. *The recent negotiations with the United States.*

A few months ago those interested in this subject were startled by the sudden announcement that a contract had been signed with a firm of American engineers for the construction of the dam. The Abyssinian Government having carried out these negotiations behind our backs, such a contract was clearly a breach of the treaty of 1902. It now appears that what actually happened was that the Abyssinian Government thought they would try to build the dam themselves and accordingly sent a representative to America to get the project financed and contracted for. Needless to say, American financiers said they would only finance it if there was proper security—a word not understood in Abyssinia. All that actually happened was that a form of contract with the White Engineering Company was drawn up, but not signed. The White Engineering Company have behaved perfectly correctly in the matter, and it is clear they are a reputable firm and have no wish to go against British interests. It is possible that for them to construct the dam would provide a suitable solution to the problem, since it would to a great extent allay Abyssinian suspicions, while control of the enterprise would automatically remain predominantly in British hands since those carrying out the work would be at the mercy of the Sudan for the security of their capital.

Experiments with the Morris Six-Wheeler.

In the early part of 1927 a Morris six-wheeler lorry was ordered for commercial use in Abyssinia, and duly reached Addis Ababa, the capital, which lies almost in the centre of the country, by rail. An account has been obtained from the Secretary of the British Legation in Addis Ababa of two attempts made under full load to reach Fiche, 70 miles to the north from the capital, which throws some light upon transport conditions in Abyssinia and upon the capabilities of this lorry.

Nature of the Country.

Abyssinian country consists of—

- (a) Valleys so steep—2,000 to 3,000 feet deep—that even men and mules must seek a spur between the main stream and an oblique tributary to descend and cross.
- (b) Passable country strewn with boulders. Within this category must be included large chasms in the lava field which are circumventable, or, if not, can be bridged, being narrow. In this terrain there are also streams with steep banks which can be bridged or having ramps cut down to the water-level and solid bottoms, are generally fordable.
- (c) Undulating country where the streams are debouching from the hills and have not yet reached the plains. These are shallow and have gentle banks and can be crossed as under (b).

In the dry season the main problem is one of finding a way over or through the boulder area. In the wet season waterways are much swollen and the rough bridges of the country are swept away. Though there are few bogs, there is great difficulty with mud, and particularly near crossing places over obstacles where large numbers of animals are continually passing, the depth of mud becomes serious. The rain in the rainy season is steady, but not violent for long periods. At the higher altitudes at least the small rivers present no serious obstacle during the rainy season, except for a few hours after a heavy fall.

The route traversed between Addis Ababa and Fiche appears to have been a fair sample of travel conditions in the country generally. From Addis Ababa, which is 8,000 feet above sea-level, there is a road to the Entotto Range. This range rises up to 10,000 feet, and the road climbs it in zigzags with a maximum gradient of 1 in 6. The

surface of the road is unmade. The road ceases at the top of the ridge, and beyond, for the greater part of the journey to Fiche, is merely a defined track ; it crosses first a flat plateau cut by streams then the north downward slope of the Entotto, with gradients of 1 in 4 and 1 in 5 then wide stretches of flat country often covered by stones and interspersed by many rivers, some of a depth of 6 feet.

Experiences with the Morris lorry.

The first attempt to reach Fiche was made between 13th and 15th July. The journey was commenced in dry conditions, and it was hoped to complete the trip before the break of the imminent rainy season. Owing to difficulties and delays the lorry was overtaken by the rains and forced to return to Addis Ababa, after proceeding only some 35 miles.

The chief points noted during this journey were—

- (a) Driving after the rains had started was exceedingly slow owing to the mud, and this, with driving over stones, threw great strain on the driver. This attempt failed more on account of the exhaustion of the solitary driver than because of any fault in the machine.
- (b) No difficulty was found in getting through the mud in most places with chains, nor in crossing many of the rivers before they were swollen excessively. The rivers were crossed either by rough bridges or by running down sloping banks and driving through the water. One gap where the bridge had been washed away was 8 feet wide and 2 feet 6 inches deep. The front wheels vanished under the water, but the hind wheels ground on slowly and the lorry emerged successfully.
- (c) Unnecessary delay was caused by carrying no spare parts.
- (d) A small amount of labour on the route, clearing stones, improving banks, etc., would have greatly increased the rate of progress.

The second attempts to reach Fiche was carried out after the rains were over. The problem then was quite a different one. During the rains the ground was so covered with water that the wheels of the lorry were continually washed and no slipping occurred ; after the rains large tracts of the country had dried up, so that, to an ordinary car, it would have been possible to proceed up to 30 miles per hour

between the bad places, but the bad places had become much worse than during the heavy rains, for the mud was greasy, was lifted by the chains, and soon choked them. Further, when the lorry had passed through a bad place and reached the dry ground with its chains clothed in mud, the mud picked up gravel which hardened in the sun, and, presenting a flat, cement-like, smooth surface, resulted in considerable slipping when the lorry entered a further patch of mud. During this trip mud-holes, which had been traversed previously, proved serious obstacles, particularly the type which just fitted the front wheels or just fitted the four rear wheels. The lorry in such a hole found itself unable to go forward or backward unless the chains happened to be on; even with the chains on, if the back wheels just fitted the holes, only digging or jacking could extract the vehicle. The lorry finally reached Fiche, but only after a delay of 30 hours due to inadvertently slipping into a mud-hole 6 feet deep, whence it was finally rescued by the use of jacks and the building of a stone bed under the axles.

The points noted during the second journey were :—

- (a) Reconnaissance of the route was essential to prevent running into mud-holes.
- (b) When climbing out of holes the lorry had difficulty in riding over sharp vertical angles, and cutting away of far banks proved necessary.
- (c) The roughness of the roadway tended to throw the steering wheel out of the driver's hands. A Renault touring car which traversed the same route found twin tyres on the front wheels of great assistance in negotiating rough stony passages. This adjustment might have assisted the Morris.
- (d) The lorry with chains proved very slow over dry ground, and without chains could not negotiate mud. Speed in the drill for taking on and off the chains became important.

Conclusion.

Whereas hitherto an impression has prevailed that troops operating in Abyssinia would be obliged to depend almost entirely upon pack transport, it appears from a close study of this report that a successful M. T. service could be operated in Abyssinia, at any rate for a great part of the year, using six wheelers. Undoubtedly with

experience. preparatory work on the routes, proper equipment, and organised columns containing spare drivers and labour, many of the difficulties which this lorry met with could be overcome.

ARABIA.

Nejd.

There has been a marked improvement in the Iraq-Nejd situation during the past month. Ibn Saud has notified his willingness to meet Sir Gilbert Clayton to discuss matters at issue between Nejd, His Majesty's Government and Iraq, and the meeting is to take place at Jeddah early in May. Meanwhile, in spite of rumours current early in the month concerning the northward movement of Akhwan concentrations, there have been no further raids into Iraq or Koweit.

South-West Arabia.

As a result of proposals made by the Imam, through the Sultan of Lahej, a truce has been arranged, and preliminary conversations have commenced for the purpose of arriving at a settlement on points in dispute between the Imam and His Majesty's Government.

On 13th April, the acting Resident at Aden left for Taiz where he carried out informal discussions with the local Zeidi Commander. The acting Resident has now returned to Aden and his telegraphic reports indicate that the Imam seems inclined to adopt a less uncompromising attitude than heretofore on the question of withdrawal from the territory in the Aden hinterland now occupied by his Zeidi forces.

AUSTRIA.

Organ of Liquidation.

The Organ of Liquidation ceased its executive functions on 31st January, but remained in Vienna until 29th February in order to draw up its final report. There still remain certain questions outstanding, for the solution of which the Austrian Government has been given until 1st July next. It will be necessary for a Commission to visit Austria after this date to verify compliance on the part of the Austrian Government. With the disappearance of the Organ of Liquidation in Austria, military control of the ex-enemy States is now at an end. The British Military Attaché, Budapest and Berne, assumed the additional duty of Military Attaché, Vienna, on 14th March.

BELGIUM.

Strength of the Army for 1928.

A Royal Decree of 27th December 1927, lays down the maximum establishment for the Belgian Army, including the Army of Occupation in Germany, as follows :—

Regular officers	..	..	4,163
Volunteers and re-engaged men	..	..	16,000
Annual Conscript Contingent (<i>Mili-</i> <i>ciens</i>)	..	..	40,000
Maximum total	..	..	61,000

5,000 Reservists (*Rappels*) are to be called up for refresher training in 1928.

Mechanization.

Tractor trials.

According to the official notification, tractor trials are to take place in May, 1928, in order to select tractors of two types for certain artillery units. Tractors are to be capable of drawing artillery material weighing up to 4,000 and 6,000 kg. (8,800 to 13,200 lbs.) respectively, either separately or in sections. They must be able to move at a rate of $1\frac{1}{2}$ to 6 miles per hour over badly shelled ground, and must be able to maintain a speed of 12 miles per hour on ordinary level roads under normal conditions. They will be required to convey their loads from 40 to 60 miles on fairly hilly roads at 9 miles per hour. The trials will take place in the vicinity of Brussels and at the Camps at Beverloo and Elsenborn. Invitations have been extended to British firms to compete.

In 1929 it is proposed to issue one Corps Artillery regiment with 50 tractors; two further corps regiments are to be mechanized in the subsequent two years.

In peace, a Belgian Corps Artillery regiment is organized in 4 *Groupes*, each of 2 batteries, as follows :—

- 1 *Groupe* of 75 mm. (G. P.) Q. F. guns.
- 1 ,, 105 mm. ,, ,, ,,
- 2 *Groupes* of 155 mm. Schneider howitzers.
- 1 Depot and Park battery.

Artillery officers and non-commissioned officers are already being trained at the Army M. T. Centre.

Belgian Army Reform.

The evidence of General Galet, Chief of the Belgian General Staff, before the Mixed Commission on Army Reform.

The present state of national defences has been discussed with considerable vehemence in the Belgian Press for the past year.

Articles in the Monthly Intelligence Summary have dealt with the recent political crisis in Belgium over the proposed reduction in conscript service, and the subsequent appointment of a Mixed Commission to investigate the whole question of national defence (see Vol. 12, No. 2, December 1927, page 29 and Vol. II No. 6, Octr. 1927, page 199). The Commission consists of 9 Officers and 17 Deputies.

The evidence given last month by General Galet, the Belgian Chief of the General Staff, has now been published in the Press.

General Galet's Evidence before the Mixed Commission.

(a) Composition of the Army.

A fortress artillery regiment has lately been created at Liège; before long others will have to be created at Antwerp and Namur.

(b) Annual Contingent.

The whole of the troops under peace conditions are formed from an annual conscript contingent of 44,000 men, which is reduced to 40,000 on account of various forms of wastage.

Of the annual contingent of 44,000—

23,040 are serving for 10 months.

12,360 „ „ „ 12 months.

8,600 „ „ „ 13 months.

This wastage is very high at the commencement of the calling-up of the contingent, when owing to medical inspection 8 to 10 per cent. are discharged as unfit.

From the contingent one must also strike out roughly 8,000 men who are utilized for carrying out barrack services, 200 priests who become stretcher-bearers, and about 2,000 intellectuals, who undergo a special course of instruction for non-commissioned rank.

The remainder of the contingent, roughly 30,000 men, is hardly sufficient to maintain the various combatant or technical units on a peace footing.

The reduced number of the contingent is not sufficient to insure a larger establishment in the various army units, than that which is necessary for instruction under satisfactory conditions, *i.e.*, 1 platoon per company of infantry, cyclists or engineers; 2 troops per cavalry squadron; 4 guns per battery in the field and horse artillery, 1 or 2 guns per battery in the army artillery.

(c) Army Organization on a War Footing.

In principle each combatant unit on a peace footing is mobilized by increasing its effectives and its cadres, and by constituting at the same time a certain number of reserve and instructional units.

The number of units on a peace footing, as compared with those required on a war footing, works out approximately in the following proportions :—

Infantry	..	..	..1 to 3
Machine guns	..	..	..1 to 3
Cyclists	..	..	..1 to 2½
Infantry battery	..	..	..1 to 3
Divisional artillery	..	..	..1 to 4
Corps artillery	..	..	..1 to 3½
Cavalry	..	..	..1 to 1½
Army artillery	..	..	..1 to 4
Aviation	..	..	..1 to 2
Engineers	..	..	..1 to 4
Transport corps	..	..	..1 to 7

For the purposes of passing to a war footing, 8 classes have to be called up for the infantry, 4 classes for the cavalry, 10 classes for the artillery, 15 classes for technical troops, corps transport, medical services and general services.

Auxiliary troops (Territorials) are formed in principle from the classes after the 15th Class.

The effectives required on mobilization amount to 195,000 men, including cadres, so far as active troops with their services are concerned; also 100,000 would be required for reserve troops, 80,000 men for reinforcements, and 124,000 men for labour, giving a total of roughly 500,000.

The Belgian Army possesses, with certain exceptions, the stocks of material necessary for these troops.

The exceptions are as follows :—

Carbines, pistols, anti-aircraft material, certain types of ammunition, a great quantity of transport, gas masks and tanks.

In order to place existing material in a good state of repair, 800 million francs are necessary.

(d) *Value of the Army on a War Footing.*

The greatest efforts will have to be made with regard to the officer and non-commissioned officer cadres for the active troops in order to bring them to a war footing.

Practically the whole of the officers belonging to these troops are serving with units, and these would have to be made up from reserve officers, who have been through the late war.

In a short time the majority of non-commissioned officers required to complete units on mobilization, will be drawn from the special candidates enlisted with a view to becoming reserve second-lieutenants.

The cadre will be satisfactory when the special candidates, who are being instructed as non-commissioned officers of the 1927 class, are in a position to carry out their duties thoroughly.

The question of reserve troops is at present dealt with in each unit separately ; one officer and one non-commissioned officer in each unit is specially detailed for calling up the reserves of that unit. The officers who would be required are reserve officers who have been through the war, and reserve officers who were *miliciens* at the end of the war.

The cadre of *sous-officiers* and corporals will be found partially from volunteers, and also from the *miliciens* themselves. The value of this last class leaves much to be desired.

The cadre of the reserve troops cannot therefore be considered satisfactory. The whole question will have to be taken in hand, and the question of special training will have to be gone into.

(e) *Sous-officiers and Corporals.*

In order that suitable instruction may be insured, it is necessary that the lower grades of *sous-officiers* and of corporals should be permanent soldiers, either volunteers or re-engaged men.

The present organisation requires 8,093 *sous-officiers* and 5,082 corporals, a total of 13,175 volunteers or re-engaged men.

In order to meet the requirements of the technical services, 1,300 volunteers are also necessary.

The total number of volunteers and re-engaged men absolutely necessary amounts, therefore, to 14,475.

Ten years is looked on as the average service required of volunteers. It would be necessary, therefore, to recruit annually 1,450 volunteers, and to allow for wastage 1,600.

In 1925 there were only 694 ; in 1926, 522 ; in 1927, 565.

However, on the 30th November, 1927, the numbers of volunteers and re-engaged men increased to 12,125, not including musicians and military workmen.

(f) Armaments.

The present state of our armaments is bad. Our Mauser rifles of the year 1889 are of inferior quality.

The question of replacing them will have to be considered.

The carbine will have to be rendered serviceable.

The study to find a short model semi-automatic weapon for cavalry and for cyclists must be considered.

A model of a long range pistol has been adopted in theory for machine gunners and for the men of the infantry batteries, also for signallers, but the necessary credits have not been voted.

The machine gun now in use is absolutely lacking in efficiency.

The number of machine guns in the various machine gun units should be raised from 12 to 16. We have three types of machine guns.

The Colt should be got rid of as soon as possible.

The Hotchkiss will have to be thoroughly overhauled.

The heavy Maxim has been overhauled, but we have no spare parts and no reserve guns.

There are 3,000 heavy Maxim guns (German salvaged), but lacking gun-carriages and spares.

It has not yet been possible to equip our army with the light Maxim. The quantity of our infantry guns of "accompaniment" and their quality is not sufficient.

We have 49 tanks of an obsolete description, nothing has yet been done in this branch of warfare.

Our armoured cars are not suited for their work.

The horse wagons which we possess are old and in bad condition and lack of funds has prevented us from considering the question of new material.

Our artillery material 75 mm. is fairly well worn, but still in a sufficiently good state to render service.

Our 75 mm. (G. P.) long range gun is more modern, and compares favourably with that of other countries.

Our 105 mm. (G. P.) long range howitzer is excellent, but the range will have to be increased.

Our corps artillery cannot be considered good and a gun of 120 mm. is in contemplation, which will give good results.

We have per corps artillery regiments four *groupes*. Six will be necessary, of which three at least must have guns of 120 mm.

Our army artillery is lacking in guns of long range. We have in our possession a material which has been salvaged from the Germans and which by means of remodelling will enable us to possess absolutely modern guns, but the expenses of remodelling will be heavy.

Our anti-aircraft artillery is insufficient. The mechanization of corps artillery is incomplete and insufficient. We lack telephonic, optical, electrical and wireless material, also specialised transport.

There is also a deficiency with regard to the material of our railway troops and of our pontoon troops.

Roughly, two-thirds of the anti-gas masks of the latest model are deficient, also clothing specially prepared for protection against gas.

With regard to our medical services, practically no mobilization equipment exists.

(g) Belgium's Strategic Situation.

General Galet called special attention to the two main lines of operation, so far as the Great Powers on the eastern frontier are concerned, which would traverse Belgium, one line running from the north-east to the south-west, the other from east to west. The importance of the latter line of operation is augmented in proportion to the ever-increasing rôle played by Great Britain as a political factor in Europe.

So far as Switzerland is concerned an invader would not be able, owing to geographical conditions, to manœuvre an army larger than the Swiss Army. Moreover, attack *via* Switzerland would expose the centre of gravity of the German army. With regard to Holland, this country also lies outside the main lines of operation ("placée excentriquement"), to say nothing of inundations which would prohibit the employment of more than one German army.

The passage across Belgium alone offers considerable advantages :—

The attack would be a direct one, the invader would be covering his own country, and it would allow of massed movements. The war of 1914 saw the passage of five German armies through Belgium.

General Galet then reviewed the effects of the Locarno Agreements; Belgium herself, being a guarantor and at the same time guaranteed, and consequently being compelled to provide an army in proportion to her new responsibilities.

He stated that one could be certain that the General Staffs of the neighbouring countries around Belgium, are determined that so far as possible, a future war should not take place in their own country.

To prevent war, and at the same time to maintain the line of resistance along the frontier, should constitute the ambition of the Belgian Military Organization.

At this point of the proceedings one of the civilian members of the Commission asked if it would not be advisable that the terms of the Franco-Belgian Military Agreement should be communicated to the Commission.

General Galet replied that that agreement was confidential, but that the question would be referred to the Government.

(h) Reasons for the Present State of Belgian Armaments.

General Galet stated that the sum required for the upkeep and repair of war material would have necessitated extra-ordinary budgets amounting to one hundred million francs; the extra-ordinary budgets, however, amounted in 1927 to nineteen million, and in 1926 to twenty-four million.

The extra-ordinary budget for 1928 will be sixty millions. This deficiency in extra-ordinary budgets accounted for the present condition of affairs in armaments.

The C. G. S. stated that to modernize the arms, equipment and transport of the army would necessitate an urgent expenditure of half a milliard francs. The sum required would necessitate a considerable lapse of time, and that in the meantime the state of the army would remain critical.

Another weakness with regard to the army is that at present no fortified regions exist on which to base its operations. A commission, it is true is dealing with this question, but much time and money would be required to realize its attainment. This fact also constituted a crisis.

To-day, should mobilization be ordered, Belgium would only be able to despatch 6 divisions to the frontier, instead of 12.

(i) Utilization of the periods of military service in the various arms.

General Galet stated that a period of ten months service allowed of only three months being devoted to field instruction and manœuvres.

Of the above, the initial period of 5 months is devoted to individual instruction, which cannot be cut down on account of the low state of education amongst the average infantry recruits. Two months have to be devoted to platoon instruction, which also cannot be decreased.

Divisions are unable to receive suitable instruction; for the period which can be devoted to exercises over unknown country is insufficient.

In order that satisfactory instruction may be insured, satisfactory weapons, rifle ranges and training grounds are necessary.

So far as the arms are concerned, evidence has already been given on this subject.

Shooting on the range is given to not more than two-thirds of the army, and in most garrisons the limited facilities for training grounds do not allow of more than one platoon being exercised at a time.

Good instructors are sadly deficient in the Belgian Army.

Amongst the Belgian officers in the infantry, two-thirds have risen from the ranks, and have not been through the Military School, nor have they benefited by the instruction given in the special platoons, which now form part of all units. It may be said that practically all company commanders in the infantry labour under the above disadvantages. The great majority of non-commissioned officers have not received a primary school education.

NOTES ON MILITARY REVIEWS.

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1. *Operations of the Belgian Army, 1914-1918. (Continued.)
Battle of the Yser. Day of the 26th October. 1914.*

Operations between the Sea and Nieuport.

In order to follow these operations, the map at the end of last October number, as well as the map on page 10 of the present number, are useful; the former map shows the country generally between Dixmude and Nieuport, and the latter map the locations of French and Belgian divisions.

In pursuance of the order given on the evening of 25th October, by the G. O. C., 42nd French Division, only three battalions with a little artillery are left to defend the Yser Canal and the Nieuport Bridgehead.

On 26th October, General Grossetti took over command of all French troops between the sea and Dixmude. The list of French troops is given on page 2. General Grossetti was ordered to insure at all costs with or without the co-operation of the Belgian troops, the defence of the Nieuport-Dixmude front. General Grossetti's dispositions are given on page 3.

Operations between Nieuport and Dixmude.

A general retirement of both the 1st and 2nd Belgian divisions, from the line of the Noord-vaart to the main railway line Nieuport-Dixmude, giving rise to a rather critical situation on the line of the railways, is described on page 3-5. The French troops between the 1st and 4th Belgian divisions held the railway, from the right of the 1st Belgian Division southwards to where they joined on to the 4th Belgian Division near Stuyvekenskerke.

The 5th Belgian Division, on the right of the 4th Division, also held the railway line, which now became the main line of defence between Nieuport and Dixmude.

Operations in Front of Dixmude.

As the result of the enemy having crossed the Yser, Admiral Ronarch, commanding the French *Fusiliers Marins* decided to retire from the river bank and to hold the outer limits of Dixmude and at the same time relieve his worn out troops. He was reinforced during this operation by two Sengalese battalions and one battalion of the 5th Belgian Division.

Operations South of Dixmude.

The article deals with the joint action of the French and British troops, from Dixmude to the Passchendaele area, with a view to relieving the situation of the Belgian Army. The scope of these operations, which were conceived by General Foch, and a description of the attack on the British salient in the neighbourhood of Kruiseck and the consequent lack of progress on the British front, are described on pages 9-11.

Decisions of the Belgian Higher Command.

In order to cope with the serious situation in which the Belgian Army found itself, with the prospect of the loss of the railway position Nieuport-Dixmude, the Higher Command decided upon lines of retreat for the divisions, should a general withdrawal of the Belgian Army become imperative. These orders were, however, not issued to the troops and the line of the railway was consolidated.

The chapter ends with accounts of the steps contemplated to flood both the country in rear of the Belgian Army, with a view to saving Dunkerque, in accordance with a preconceived plan of General Foch, and also the country on the line of the Nieuport-Dixmude railway. Neither of these schemes were put into execution.

2. *The Belgian effort on Lake Tanganyika during the War 1914-18.* By Captain Weber. (Continued). Of interest.

Part III of this work starts with an account of the action and development of aviation on the lake, under the general command of General Tombeur. The material in question consisted of hydroplanes handed over by the British Admiralty, which successfully knocked out the two German gunboats "Von Gotzen" and "Adju-dant", and gave to the Belgians the mastery of the lake.

On pages 20-27 the activity of the Belgian flotilla on the lake is described at some length, special mention being made of Commander Simson's wise councils for the conduct of operations, in his capacity of inter-allied flotilla commander. A lack of agreement between Commander Simson and Colonel Moulart, the commander of the lake operations, led to Commander Simson leaving Albertville with his flotilla, in order to co-operate with the Rhodesian troops further south. Page 23.

Part III ends with an account of the telegraph communications in the zone of operations as they existed in March, 1916, and of the great improvements attained both in telegraph and wireless communication by December, 1916. Pages 27-28.

Chapter V (pages 29-36) shows the use which was made of the mastery of the lake, resulting in the repair and exploitation of the Kigoma-Tabora railway. An appreciation of the general organization of the lake transportation services is given on pages 29-30, and a general review of the success of the operations in the Tanganyika province ends the narrative.

3. *Manœuvre in Retreat.* By Captain Dujardin. Of little interest.

This article is a treatise on the best methods of conducting rear-guard actions, which the author proves are rendered possible by superiority of fire on the part of the rearguard and facilitated by the employment of the most modern fire-arms.

Many examples are given from the Napoleonic Campaigns (page 38), showing how Napoleon exploited this method of retirement.

The author then passes to the Great War to prove how especially, in 1918 as also in 1914, the German Army made full use of their superiority in artillery and automatic weapons to cover the retirement of their armies. Lengthy extracts from the German regulations *Hinhalten des Gefecht*, which is defined by the author as meaning either combat of demonstration or combat of delay, are given as an interpretation of the rôle of rearguard action; the various arms best suited to insure the success of such retrograde movements are fully discussed, i.e., infantry, cavalry, artillery and aviation.

4. *Tanks. Part II.* By Major Lievin (Continued). Of interest.

In this article the principal types of tank described are the Renault (French), the Whippet (British), the Saint Chamond (French), the Christie I (American), Christie II and the Peugeot (French).

The chapter is divided as follows :—

- (a) Speeds which are under modern conditions required of tanks in war.
- (b) General considerations with regard to mobility, especially with a view to obviating the long halts now necessary for overhaul. The mobility of tanks should equal that of the lorry.

The transport of light tanks on lorries or on trailers, which attained useful results during the war, is only an emergency method which should be given up.

The two solutions with regard to mobility now under consideration are :—

- (1) Tanks with dual means of propulsion, *i.e.*, interchangeable wheel or track according to the nature of the country.
- (2) Insuring that track machines are able to travel by road at the same average speed as machines on wheels.

The chapter is profusely illustrated with various tanks used by modern armies.

5. *Study of the problem of fire concentration. Part III.* (Continued). By Major E. Smedts.

Of interest only to the scientific branch of artillery.

A very technical and mathematical treatise on artillery fire.

6. *Carrying out the clauses of the Versailles Treaty regarding control.* By Paul Roques. Of interest.

The writer divides this note on the work of the Interallied Commission of Control into two parts. Part I reviews the work the Interallied Commission in Germany. Part II deals with the taking over of this work by the League of Nations from 1st January, 1927. Part I clearly sets forth the obstructions to effective control in Germany, which the writer attributes to the evil genius of Genera-

Von Seeckt. The difficulties of control work in connection with war material, factories and inspection are clearly explained.

Part II deals with the work under the League of Nations, and emphasizes the essential steps which should be taken to facilitate the work of control and investigation generally.

7. *Machine gun fire in the intervals between co-operating troops.—Measures of security.* By Lieut. Borzec. Of interest to machine gunners.

A highly technical article on machine gun fire in defence, explaining the so-called "Collard" theory of angles of security at varying ranges, for machine guns firing over the heads of infantry in advanced positions.

February, 1928.

I. *Operations of the Belgian Army, 1914-1918. (Continued.)*
The Yser Battle, 27th October, 1914.

A.—*Operations between the Sea and Dixmude.*

The map at the end of the chapter, and also the map in the October 1927 number, show the localities referred to.

So far as the French and Belgian troops in this sector of the front are concerned, very little of interest happened on the 27th October. The French troops who were east of the railway Nieuport—Dixmude were withdrawn on to the line itself.

On the Belgian front in the same sector (between Pervyse and Stuyvekenskerke), the 4th Belgian Division conformed to the retirement of the French divisions on its left. At the same time, the 3rd and 6th Belgian Divisions were brought back into support during the night of the 27th/28th October.

The new disposition of these divisions is shown on page 94.

B.—*Operations to the south of Dixmude.*

In this sector the French 17th and 31st Infantry Divisions carried out a vigorous offensive on the morning of the 27th October, the objectives being Passchendaele-Roulers for the 17th Division, Westroosebeke-Staden for the 31st Division. In this attack the French appear to have lost heavily.

Further north General de Mitry was held up in his attack in the neighbourhood of Mangelaerts (south-west of Houthulst Forest).

So far as the British Army is concerned, south of Dixmude the only event of importance was the break up of the IV Army Corps, which at the time only included the 7th Division and 3rd Cavalry Division. The former joined the I Corps and the latter was transferred to the Cavalry Corps.

The chapter closes with the decisions taken by the Belgian Higher Command for operations on the 28th October, and with a brief account of the partial inundations carried out in the neighbourhood of Furnes by opening the lock gates in that portion of the Nieupoort-Furnes Canal.

2. *The Offensive. Method with regard to the Disposition of one's Troops against an Adversary securely established on a well-organized Front and well supported.* By Colonel Hans. Of interest.

This article is compiled from extracts from Tome VII, Vol. I, of the French war history (" Les armées francaises dans la grande guerre"), containing the conclusions come to on matters of higher strategy, by Foch, Mangin, Fayolle, Petain and others.

The article deals first of all with the dispositions in the attack of divisions forming the first line, and subsequently with divisions in the second line of attack. Such matters as the advantages and disadvantages of limited or unlimited objectives in the attack are discussed. It would appear that the British Army is credited with a preference for the limited objective. Page 109.

The conclusions come to in this article bring out the truth of Napoleon's maxim that victory belongs to the army which manœuvres, and that whenever an army is occupying a prepared position, it is incumbent on its adversary to turn or envelop the position.

3. *Tanks. Part III.* By Major Lievin. (Continued). Of interest.

B.—*The power of crossing gaps, breaking down obstacles and of climbing slopes.*

This article, which is once more profusely illustrated with designs of British, Renault, Fiat and American tanks, is divided into three parts: Crossing gaps; Power of breaking down obstacles; Climbing powers.

Part I. Crossing gaps.—By this is meant the width of gap which the tank can cross at a bound; for a light tank this is put

down at $1\frac{1}{2}$ to 2 yards as a minimum. For medium tanks the width of gap which the tank should be able to cross is estimated at from 2 to 3 yards, whereas for a heavy tank a 4·3 yards gap is given as the minimum.

Reference is made on page 119 to the British effort at Cambrai in 1917, when 450 tanks were launched in the attack, and where gaps of over 4 yards had to be negotiated.

Allusion is made on page 119 to British tanks equipped with tank bridges for the purpose of crossing gaps up to 8 yards.

Part II. Power of breaking down obstacles. Page 122.—The tank does not depend on shock tactics to crush its obstacles, but on horizontal pressure, slow but continuous. This matter is discussed from a technical point of view on pages 122-124.

Part III. Climbing powers.—A war tank should negotiate a slope of 1/1, and this can be accomplished by the majority of tanks now in use. Page 124.

The vulnerability of tanks when in process of climbing a steep slope is discussed on page 125, as also the mechanical construction of the Renault Kegresse, with a view to obviating this defect.

The question of amphibious tanks, and the efforts in this direction made by the British Army in 1922 is discussed on page 127, also those of the American Army in the same direction on pages 128-129.

4. *Study of the problem of fire concentration.* By Major E. Smedts. (Continued).

A highly technical and mathematical study on artillery. Of interest to the technical branch only.

5. *Napoleon: his Life and Work. An appreciation of his career.* By Major Delvaux. Of historical interest only.

6. *The Russian Military Organization.* Of interest.

This article, taken partly from articles in the "Revue Militaire Francaise" and from the League of Nations Armaments Year Book, gives an exceedingly interesting account of the Russian Army of today, divided as it is into two parts—the permanent army, which forms the cadres and insures the protection of the frontiers, and the territorial army, of which the cadre only (1 in 10 of the total effectives) is permanent.

It appears from this article that the annual contingent of men liable to service amounts to between 950,000 and 1,000,000.

The permanent army numbers 562,000 men. This includes the Fleet.

The article is divided into five parts —

- A.—The superior directorate of the army.
- B.—Military obligations.
- C.—Recruiting.
- D.—Mobilization.
- E.—Composition of the peace time army.

Under A the following matters are dealt with:—

- (1) "The people's high commissioner," who is the head of a commission dealing with the organization, administration and supplies of all forces on land and sea.
- (2) "The military revolutionary soviet" which exercises the higher command with regard to the army, naval and air forces.
- (3) Organizations which come under the orders of the military revolutionary soviet.
- (4) The commander-in-chief.
- (5) The army staff.

A final appreciation of the Russian military forces from the "Revue Militaire Francaise" is given on page 177.

March, 1928.

1. *Operations of the Belgian Army, 1914-1918. The Battle of the Yser. Day of the 28th October 1914.*

French Troops.

In compliance with an order of General d'Urbal, 2 French infantry battalions and 8 field batteries, belonging to the force under General Grossetti, were placed under General de Mitry's orders near Woesten, with orders to attack immediately in the direction of Zuydschoote.

The 38th French Infantry Division, a new division on this front, was detained on 28th October and despatched south to co-operate with the troops mentioned above.

Belgian troops.

The dispositions of the Belgian troops on 28th October were as follows :—

The 2nd Division were occupying the railway Nieuport-Dixmude, between the Furnes Canal on the north to Violon Farm on the south, a front of about 3 km. (*vide* sketch map on page 187).

The method by which the commander of the 2nd Division proposed to carry out the relief of his troops is given on pages 187-188.

The 1st Division held the railway from the point K 10 to the Reigersvliet on a 3 km. front (*vide* map on page 189).

The 4th Division occupied the railway between points K 6 and K 5 and were in liaison with the 5th Division.

The 5th Division occupied an east to west position astride the main railway line, joining the 4th Division on its left flank and the French troops on its right flank at point B 16 on the Yser (*vide* map on page 190).

The 3rd and 6th Belgian Divisions spent the 28th October in being reorganized.

The 1st Cavalry Division, assisted by the 2nd Cavalry Division, protected the bridge heads on the Loo-Furnes Canal, running parallel to and south-west of the Nieuport-Dixmude railway line (not shown in map).

Operations south of Dixmude.

The French troops under General de Mitry and under the commander of the 9th Army Corps made no progress in the allied attack, which had been planned for the 28th October. So far as the British troops were concerned the Germans made several attacks on front of the 2nd Division, which were beaten off. The day of the 28th may be said to have been uneventful.

2. The rôle of the Belgian Field Army and of the Belgian Fortresses in 1914. By Lieutenant-Colonel Duvivier and Captain Herbiet.

Of interest. The March number of the *Bulletin Belge* gives the preface to this work, which will be continued in subsequent numbers. It will form a highly interesting study of Belgian strategical problems, both during the war and also as a guide to the future policy

of defence. The authors are both experts in military history. The preface forms a strong denial of the account given at Berne before the society of officers on 26th January, 1927, by the Swiss Colonel Jenny, in which the latter belittled the Belgian military effort in the defence of the Liege and Antwerp fortresses and compared the Belgian defence of their fortresses unfavourably with the French effort at Verdun.

3. *Artillery fire in direct liaison with Infantry during Manœuvre.*
By Colonel Mozin.

Of interest. The writer deals with this subject in three chapters :—

(1) What type of fire should the artillery employ in the attack when co-operating with infantry.

(2) Supporting fire which has been studied before hand and that which is unexpected. How should the infantry word a request for artillery support, and the method by which the artillery should reply.

(3) What is the effect of concentrated artillery fire, which is opened suddenly or haphazardly.

Under each of these headings instances are given from the war in support of the writer's theories.

Chapters I and II are only dealt with in this article which is to be continued.

4. *The requirements of Military Organization in Peace Time in accordance with the new French Regulations.*

This article establishes the fact that the new French military peace organization has been drawn up with a view to fully assuring the triple rôle of instruction, of *couverture*, and of mobilizing the army on a war footing.

Counter projects which do not respond to the above requirements have been rejected.

The Government projects which have given satisfaction, especially on account of insuring an adequate period of military service, have received the prompt support of Parliament.

They are based on the principle of security first, term of service second.

5. *Deliberations of the Mixed Commission appointed with a view to proposing methods of reorganization which are considered necessary in the Belgian Army.*

These are extracts taken from the first six or seven sittings of *La Commission Mixte*. See Monthly Intelligence Summary, Vol. XII, No. 3, January, 1928, page 57.

6. *The Military Organization of Germany.*

This chapter starts with a short biography of the German War Minister, General Groener, taken from *Vorwaerts* of the 20th January, 1928.

The chapter then discusses the organization of the German Army :—

A.—Generalities.

- (i) The object of the army.
- (ii) Its characteristics.

B.—Recruiting.

- (i) Methods of recruiting the men.
- (ii) Methods of recruiting the officers.

C.—Organization.

- (i) Formations.
- (ii) Units.

D.—Establishments.

- (i) Command and administration of the army.
- (ii) The units.

E.—Instruction.

- (i) Instruction of the troops.
- (ii) Instruction of N. C. O's.
- (iii) Instruction of officers.
- (iv) Instruction of large formations.

F.—The military instruction of German youths.

APRIL 1928.

1. *Operations of the Belgian Army during the 1914-18 Campaign. (Continued). Battle of the Yser—Operations between the sea and Dixmude—Day of the 29th October, 1914.*

French troops.

In front of Nieuport and Dixmude, the enemy's offensive was limited to artillery fire only: between these two localities, their

infantry, however, carried out several attacks, of which the most important was directed against the French troops stationed between the 1st and 2nd Belgian Divisions, between k. 10 and k. 11 on the railway south of Ramscapelle (*vide* sketch map in previous chapters). These attacks were repulsed.

On the evening of 29th October three French battalions detrained at Furnes and were sent as reinforcements to General Grossetti.

Belgian troops.

2nd Division.—The night of 29th-30th October passed without incidents of any importance and the relief of regiments holding the railway position was effected.

1st Division.—On this front the enemy's bombardment of the railway position became intense and a few infantry skirmishes took place, the most important in the neighbourhood of Pervyse. These attacks were without any definite result.

On the night of 29th-30th October, the 3rd Belgian Division relieved the 1st Division.

On the front of the Belgian 3rd, 4th, 5th and 6th Divisions, no incident of importance took place during 29th October, and the necessary relief of units took place during the night.

The 1st and 2nd Cavalry Divisions performed the mission allotted to them the previous day, *i.e.*, the occupation of bridge-heads on the Loo Canal.

Operations south of Dixmude.

French troops.

On 29th October, the reinforced 42nd Infantry Division was grouped under General Humbert and formed into the 32nd Army Corps. The French troops operating on the Belgian Army front were formed into three groups as follows:—

The Northern group under General Humbert (38th, 42nd and 89th Infantry Divisions).

The Central group under General de Mitry (87th Infantry Division, 4th and 5th Cavalry Divisions).

The Southern Group under General Dubois (17th, 18th, 31st Infantry Divisions and 6th Cavalry Division).

Their respective missions were :—

Humbert group.—To maintain, in co-operation with the Belgian troops, the integrity of the front Nieuport—Dixmude, by attacking in the general direction of Clercken, Zarren, Thourout.

de Mitry group.—To attack in the direction of Mangelaere and Bulte Hoek (south-west and west of Houthulst Forest).

Dubois group.—To pursue the offensive in the direction of Staden and Roulers.

British troops.

At dawn on the 29th October the enemy launched a violent attack on Gheluvelt and occupied a portion of the British line. The British troops suffered heavy casualties, although the loss of ground was slight. The incident, however, was serious in view of the proposed attack by the enemy on Ypres on the following day.

The chapter ends with the decisions taken by the Belgian Higher Command for the operations of 30th October.

2. *Rôle of the Belgian Field Army and Fortresses in 1914.*

By Lieutenant-Colonel Duvivier and Major Herbiet.

(To be continued). Of interest.

(1) *The history of Belgian fortifications.*—This chapter starts with an interesting historical record of the reasons which led up to the system of fortifying Belgian territory, dealing especially with the periods of 1830, 1851 and 1859, and the creation of the fortified camp of Antwerp in 1906 (pages 295-304).

Part II deals with the state of the Belgian Army and of the fortresses at the outbreak of the war in 1914, and gives an interesting description of the fortresses of Liège, Namur and Antwerp at that date, and shows how the armament of these fortresses suffered from lack of long-range artillery, compared with that in possession of the enemy.

3. *Artillery fire in direct liaison with Infantry Manœuvre.*

By Colonel Mozin. (Continued from March number).

Of Interest.

This month's article deals with the following subjects (pages 315-323) :—

- (a) How should infantry word their request for artillery support ?

- (b) How should the target be described ?
- (c) How should the duration of the artillery fire be determined ?
- (d) At what distance from the objective should the infantry be, when a request has been made for artillery support ?
- (e) How will artillery reply to infantry demands for support ?

Chapter III of this article deals with the question as to what faith can be placed in the efficiency of concentrations of artillery fire, which are opened without due preparation.

On page 328 the author gives his general conclusions.

4. *The Siting of Field Batteries.* By Lieut.-Colonel Thomas.

Of interest to the scientific branch of artillery only. This is another highly technical and mathematical article by the author of similar articles on the science of artillery, which have appeared in recent numbers of this journal.

5. *Tanks.* By Major Liévin. (Continued).

Part IV C. The Methods of Fire.—This part deals with the normal mission of tanks of *accompagnement*, which are to assist the advance of the infantry by working in co-operation. The writer states that the armament of such tanks should be relative to their tonnage, and should fulfil certain conditions :—

- (a) Be able to break down rapidly all resistance met with in open country.
- (b) Be capable of dealing with armoured cars and anti-tank weapons.
- (c) Be capable of being employed under all battle conditions against protected targets, as well as against targets which are merely masked.

These tanks, moreover, should carry a supply of ammunition sufficient to prevent the fighting units being harassed in bringing up ammunition during the fighting. This ammunition should include—

Armour piercing shells.

Explosive shells.

S. A. A. boxes.

Smoke bombs.

The author then gives certain characteristics of light tanks in use (the Renault and the Fiat), dealing especially with their armament.

Illustrations are given of the Renault tank gun with its shield, and the Saint Chamond tank armed with a 13-mm. anti-tank machine gun.

Part D.—Deals with the protection afforded to the tank crews and the interior portions of the machine, special reference being made to the German anti-tank 13-mm. machine gun mentioned above.

On page 352 the new Swiss anti-tank 20-mm. *Oerlikon* gun is discussed ; it is considered a good weapon. Other guns, in addition to the Swedish and Italian guns, are discussed on pages 353-358.

The other subjects mentioned are—

(a) Protection against gas.

(b) Optical instruments, including the stroboscope and periscope binoculars.

The article ends with certain observations on the inconveniences resulting from mechanical propulsion, chiefly due to noise and the number of men forming the tank crew.

6. *Napoleon I: His Life and Work.* By Major Delvaux.
(Continued from February number.)

Of historical interest only.

7. *Method of constructing the Swedish Topographical Model Map.* By Lieutenant Lambert.

This is a description of the Swedish method of giving instruction in map reading and the carrying out of tactical schemes on an indoor reproduction of the ground to be worked over, formed by sand models and other artificial methods of representing the topographical features in question.

This contains nothing new.

BULGARIA.

Strength and Organization.

At the end of May, 1927, when the Organ of Liquidation was finally dissolved, the total strength of the army was 29,792 officers and men, and 2,713 civilians. The latter are being gradually dismissed in order to bring the strength down to the 30,000 allotted by the Treaty of Neuilly. Of this strength 3,000 are frontier guards, and 6,800 gendarmerie, leaving approximately 20,000 for the army

Equipment.

The equipment is almost entirely German ; according to the Organ of Liquidation it is in very good order. There are probably sufficient arms and equipment to put into the field 100,000 men, which is about all that Bulgaria could mobilize on the outbreak of war. However, there are many indications pointing to the fact that Bulgaria is introducing into the country at regular intervals further munitions of all kind. If this continues she may, in the future, be in a position to equip her normal mobilized strength, which can be taken to be in the neighbourhood of 300,000 men.

Training.

The German training manuals have been taken almost verbatim for the use of the army. Most of the senior officers have had training in Germany and generally speaking the army is imbued with German ideas. Since the war nothing bigger than regimental exercises have taken place, and no foreign officers have been allowed to attend these.

CHINA.

THE SITUATION.

1. Civil War.

(a) Eastern Sector.

The expected Nationalist advance commenced on 10th April, when Chiang Kai-Shek launched his troops northwards from Suchow. The attack was made in three columns.

(i) *Right Column.*—Starting from Haichow, the eastern terminus of the Lunghai railway, this column advanced without opposition into Shantung, and on 28th April had succeeded in reaching the Tsingtao—Tsinanfu—railway, 75 miles east of Tsinanfu, where the railway and telegraph lines were cut.

(ii) *Centre Column.*—This consisted of the bulk of Chiang's forces, and moved northwards along the Pukow—Tientsin railway. Prominent in the Nationalist forces was Chang Fak-Wei, the Communist leader, who had hurriedly moved up to support Chiang. Serious opposition was encountered and heavy fighting took place, but the Nationalists succeeded in advancing. Considerable disorder occurred in Sun Chaun-Fang's armies, which withdrew northwards.

By 20th April the Nationalists were within 40 miles of Tsinan, the capital of Shantung. Sun's forces were supported from the rear to some extent by those of Chang Tsung Chang, but one of the latter's armies seceded to the Southerners.

By the end of the month the Nationalist advance had been brought to a standstill, leaving Tsinan still in Northern hands. Both sides were preparing for further hostilities after reorganizing their forces.

(iii) *Left Column*.—An advance from the Lunghai railway west of the Grand Canal was undertaken with small forces, which had little effect on the main advance.

(b) *Western Sector*.

With the object of preventing Feng co-operating with Chiang Kai-Shek, the Northerners attacked Feng's advanced troops on the Peking—Hankow railway early in April. This attack met with some success and Feng withdrew.

Shortly after, however, Feng moved north-eastwards from Kai-feng between the Lunghai railway and the Yellow River in the direction of Tsinan, with a force that appears to have consisted chiefly of cavalry. This advance met with rapid success and assisted Chiang's advance, in that Sun's withdrawal was thereby hastened. Feng's object was apparently to reach Tsinan before Chiang.

By the end of the month Feng's advance had been held up some distance south-west of Tsinan, and the Northern forces were reported again to be contemplating an attack against Feng along the Peking—Hankow railway.

(c) *North-Western Sector*.

Up to the end of the month there has been no serious conflict between the Northern forces and those of Yen Hsi-Shan. Large Northern forces are, however, still retained at Paoting and Chentingfu on the Peking—Hankow railway, ready to deal with any advance by Yen.

Thus the opening round has gone in favour of the Nationalists. The latter have not yet, however, come into serious contact with Chang Tso-Lin's own Manchurian troops, the bulk of whom are in the Paoting area, and who may be expected to put up a better resistance than those of Sun Chuan-Fang or Chang Tsung-Chang.

2. *Split in the Kuomintang.*

Nothing further has been heard this month of the report mentioned in the March Summary of the return to Hankow of Tang Sheng Chih.

The military leaders at Hankow agreed to the appointment of a nominee of Chiang Kai-Shek's to the chief political post of the provinces of Hupeh and Hunan. Actually, this official will be purely a liaison officer between Nanking and Hankow, for the military leaders at the latter state they will allow no interference from Nanking.

A concentration of the forces under the control of the Hankow régime was effected at Hankow ostensibly to support the anti-Northern offensive.

The only assistance rendered, however, was the despatch of a few of the worst Hankow troops northwards to help Feng, but nothing has been heard of them since they left Hankow.

No further fighting between the Hankow forces under Cheng Chien and the forces under Ho Chien has occurred, and it is reported that some form of agreement between them has been arrived at. Yangsen is also reported to have met the Hankow leaders in conference. It is probable that all these groups in the Hankow area are waiting to see the result of the present fighting between north and south before committing themselves to any definite line of action.

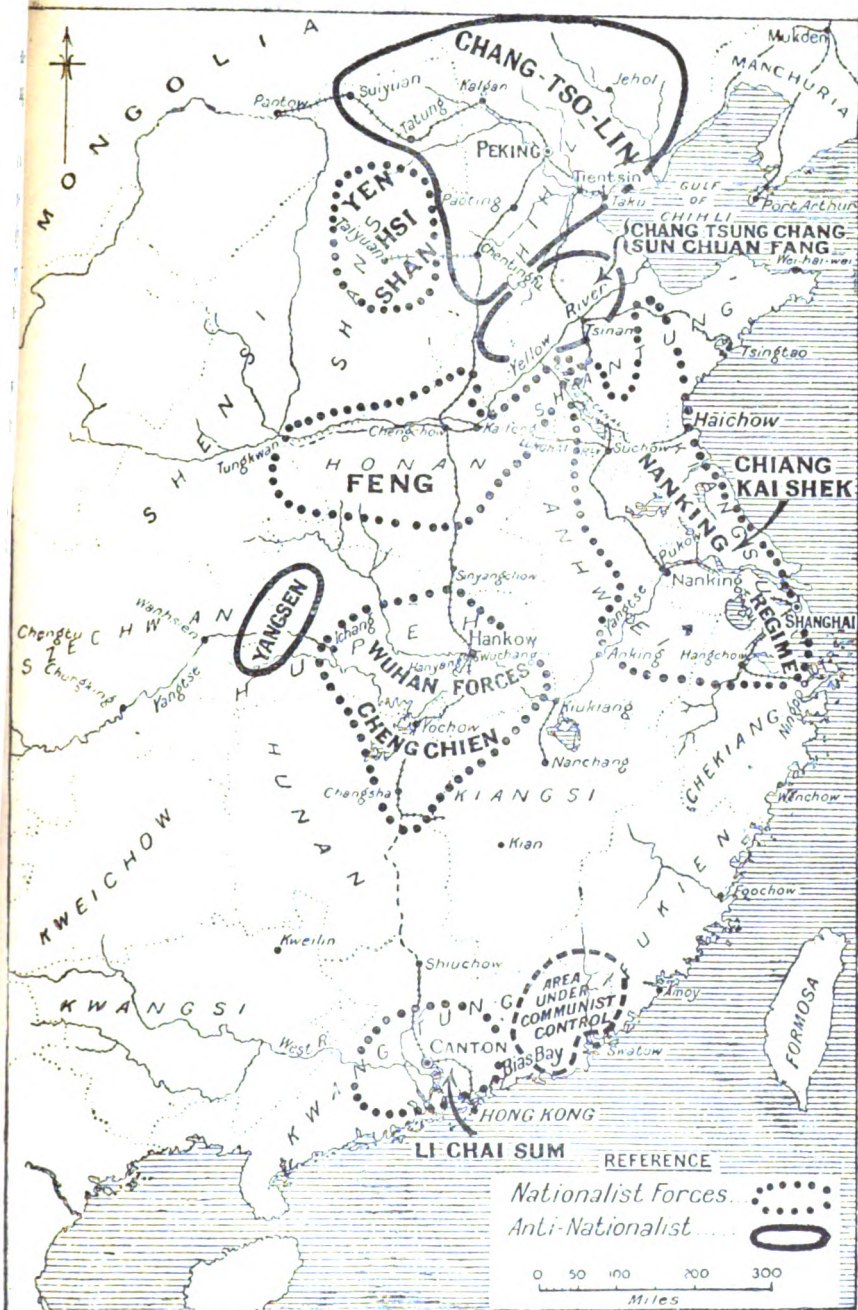
Li Chai-Sum, who, as reported in the March Summary, left Canton suddenly for Nanking, returned to Canton at the end of April. No assistance from Canton for the Nationalist advance, either financial or military, appears to have been forthcoming.

The desperate need of support felt by Chiang Kai-Shek is illustrated in the fact already mentioned that Chang Fak-Wei was in the forefront of the attack. Chang will be remembered as the extreme Communist who, having overrun Kwantung with his Communist army, staged the rising in Canton in December, 1927. He has since been occupying eastern Kwantung, whence he moved northwards to Chiang's assistance shortly before the advance began.

4. *Situation at various centres.*

Hankow.

Some friction has occurred during the month between the Chinese authorities and the French Concession officials. The



former accused the latter of harbouring Communists, and threatened to place a cordon round the Concession in order to cut off all outside communication. The threat has not yet been put into effect, and the situation has become less acute.

The French Admiral has proceeded to Hankow where the French Concession is defended by a machine gun company. A second company is being held in readiness at Shanghai to proceed to Hankow if required.

The rendition of the French Concession is now being demanded by the Chinese authorities, who state, however, that they wish to achieve this by negotiations and not by force.

No anti-British feeling has been reported.

Canton.

Canton has been quiet during the month. A Communist plot was discovered on 31st March. Martial law was declared and a number of arrests were made. Several executions took place. Since Li Chai-Sum's return from Nanking the situation has become easier.

Swatow.

Two attempts by Communists to seize Swatow were made during the month, but in each case the Communists were driven off.

The Upper Yangtze.

Bandits continue active on the Upper Yangtze and firing on British and other ships has been again reported during the month. The efforts of local Chinese authorities to suppress these pests have apparently had no success.

An attempt to work up an anti-British boycott at Chunking (400 miles above Ichang) early in the month met with no success.

During the month Wu Pei-Fu left this region and is reported to have retired from the Chinese stage to take up his residence permanently in a Tibetan monastery.

5. *Japanese attitude towards events in China.*

In order to protect Japanese interests in Shantung a force of 5,000 men was despatched from Japan and landed at Tsingtao on 26th April. (For further details of the despatch of this force see article under Japan in this Summary).

Formal protests against this action have been made by both Northern and Southern Chinese Governments.

Following the cutting of the Tsingtao—Tsinan railway by Nationalist forces, a force of 1,500 Japanese troops left Tsingtao on 29th April for Changtien—70 miles east of Tsinan—to repair the line and restore communication between Tsingtao and Tsinanfu. This illustrates the lack of hesitation on the part of the Japanese to use their troops in protection of their interests in China.

6. *Chinese piracy.*

Owing to indications that the activities of Chinese pirates were about to recommence, it has been decided to station armed British guards on certain British vessels sailing in the Hong Kong area.

7. *China arms embargo.*

A further step towards securing adherence to the terms of the China arms embargo has been made, by the agreement of all Lloyds' underwriters not to insure any consignments of arms or munitions destined for China.

EGYPT.

POLITICAL SITUATION.

On 30th March, Nahas Pasha replied to the *aide memoire* of 4th March in which His Majesty's Government expressed their disapproval of certain legislative measures proposed by the Egyptian Cabinet. In this reply he asserted that the interference of an outside authority was an unwarranted infringement of the rights of an independent nation, and he ignored the special position in which Great Britain stands in Egypt in virtue of the Declaration of February, 1922.

On 4th April, the text was published of His Majesty's Government's reply to the Egyptian Note. In this, His Majesty's Government refused to allow that Nahas Pasha's Note gave a correct exposition of the relations between the two countries, and reiterated their adherence to the Declaration of February, 1922, in which the independence of Egypt was declared, subject to four reservations.

These were—

- (1) The security of the communications of the British Empire in Egypt.
- (2) The defence of Egypt against foreign aggression or interference.

(3) The protection of foreign interests in Egypt, and the protection of minorities.

(4) The Sudan.

It had been hoped that progress towards a solution of these four points would be made by the negotiation of a new treaty, but on the breakdown of the negotiations with Sarwat Pasha such hopes were dispelled. Consequently the *status quo ante* still continued with the reserved points remaining reserved to the absolute discretion of the British Government.

The Egyptian Government withheld their reply to this communication, but towards the end of April the Cabinet, under pressure from the extremist members of the Wafd, appeared to be intent on testing British sincerity by proceeding with the passage of the Public Assemblies Bill. This Bill is one of the measures to which exception has been taken by His Majesty's Government on the ground that it would endanger the security of foreign nationals, for which they held themselves responsible under the Declaration of February, 1922.

In consequence, on 19th April a verbal warning was addressed to the Prime Minister by the High Commissioner, expressing in categorical terms the objections of His Majesty's Government to the Assemblies Bill. As the warning had no apparent effect, on the 29th April a written ultimatum was handed to the Premier, demanding the withdrawal of the Bill within 72 hours. Failing compliance, His Majesty's Government reserved the right to take such measures as it deemed necessary to meet the situation.

On 1st May, the Prime Minister handed his reply to the High Commissioner. This note reiterated the Egyptian Government's view that they could not recognize Great Britain's right to interfere in Egyptian legislation. In consideration, however, of their desire to reach an amicable understanding the Egyptian Government undertook to suspend consideration of the Assemblies Bill until the next Session.

His Majesty's Government, in a further Note, accepted his assurance of the friendly sentiments of the Egyptian Government and noted the postponement of the Bill, but stated that if the Bill was reintroduced measures would again have to be taken to prevent its enactment. In addition, His Majesty's Government asserted that they could enter into no discussion respecting the Declaration of February, 1922, which they would not permit to be either modified or disregarded.

CZECHOSLOVAKIA.**COLOUR SERVICE.**

At the end of 1927 the War Minister announced that the period of colour service could not be reduced from 18 months to 14 months until the requisite number of long service non-commissioned officers are available to train the army on the reduced service basis.

TRAINING.

In the interests of economy no grand manoeuvres took place in 1927, training culminating in inter-divisional exercises.

DISENFRANCHISEMENT OF THE ACTIVE ARMY AND GENDARMERIE.

A law to the above effect has recently been passed, despite strong disapproval. The Minister of National Defence has, however, expressed himself as well satisfied with the results to date. The law is believed to have been originally aimed against the anti-militarist activities of the Communists, who are numerically strong in the country. It is also capable of destroying any tendency to undemocratic Fascism among the officers.

RAILWAYS.

On 8th December, 1927, work was commenced on the new Moravian-Slovakian railway, which is to run from Veseli on the Morava (about 10 miles south-east of Brno) through Nove Mesto on the Vah. The object of the railway is purely strategical, in order to provide communication with Slovakia at a safe distance from the frontiers.

PRODUCTION OF NITRATES.

On 26th January, the Defence Minister, in a speech before the Defence Committee of the Senate, stated that until 1929 Czechoslovakian explosives factories will be forced to depend upon imports of nitrate from Chili to supply their needs. The production of nitrates, the Minister went on to say, depends upon the bigger problem of electric power, and plans for the production of the latter included the construction of dams in the valley of the Moldau at Stechovice, 15 miles south of Prague, and in the valley of the Vah (Waa). In the latter valley a hydro-electric power station will be completed in 1929, the surplus power from which will be employed to produce hydrogen, for the manufacture of nitrates. It has been ascertained that the surplus hydrogen produced at the great coking furnaces near Moravian

Ostrau (on the Silesian frontier) is not fully used up, and it has, therefore, been decided to erect two nitrate-producing factories, one at Marienberg near Moravian Ostrau, and the other at Semtin (60 miles east of Prague), where a large explosives factory is situated.

As soon as the Stechovice dam is finished it will be possible to erect there another nitrate factory, so that eventually there will be a total of four such factories in different parts of the Republic and these will be sufficient to meet its needs.

EGYPT.

ANGLO-EGYPTIAN NEGOTIATIONS.

After protracted negotiations and discussions extending over a period of many months, the draft of a new Anglo-Egyptian Treaty was drawn up towards the end of last year by His Majesty's Government in collaboration with the Egyptian Prime Minister, Sarwat Pasha. Sarwat then undertook the unpromising task of piloting this draft, to the terms of which he had personally agreed, through his own Parliament. An interval of laborious political manœuvre followed in which the extremist or anti-treaty party always appeared to have rather the upper hand. It was, however, not until 5th March that Sarwat bowed before the opposition and informed the High Commissioner in Egypt that the Wafd and his Cabinet had finally rejected the proposed treaty.

Sarwat thereupon tendered his resignation to the King, who had no course but to accept it.

At this juncture His Majesty's Government presented a firm note to the Egyptian Government emphasising their adherence to the Declaration of February, 1922. At the same time the whole of the connected correspondence, together with the full text of the draft treaty, was published in the Press and elsewhere.

For a brief space exhibitions of hooliganism by gangs of irresponsible students took place in various centres in Egypt, but these were quickly suppressed, and the prevailing excitement died down.

Finally, on 16th March, Mustapha Nahas Pasha, the President of the Chamber and leader of the Wafd, was entrusted with the formation of a new coalition Cabinet which proved to comprise eight Wafd and two Liberal members.

FRANCE.

JANUARY 1928.

The Military Budget for 1928 (Metropolitan and Colonial Office). See Monthly Intelligence Summary, Vol. XI, No. 3, for July 1927, pages 93 and 94, and Monthly Intelligence Summary, Vol. XII, No. 2, for December 1927, page 39.

(a) General.

The Budget has now been passed by Parliament and promulgated. No important changes were made in the Government proposals, although some minor economies were effected.

The 1928 effectives approximate closely to those maintained in 1904, but in a report to the Senate it is stated that the expense of maintenance in gold francs is double, that the soldiers serving for 18 months as at present cost double the amount for instruction, cadre and armament, and that this state of affairs will be accentuated when service is reduced to one year.

(b) Expenditure.

The following estimates were approved :—

Ministry of War	..	..	6,030,916,970 francs.
Rhine Army	..	..	511,627,160 „
Colonial Military Budget	..	..	395,259,130 „
Total	..	..	<u>6,937,803,260 „</u>

At the present rate of exchange this is the equivalent of £55,868,000.

(c) Establishments.

Metropolitan Budget (troops stationed in Europe, North Africa, Syria and China) :—

Officers	..	..	28,630
French other ranks	..	..	369,571
Foreign Legion	..	..	16,500
North African other ranks	..	..	103,532
Colonial natives	..	..	50,317

Of the other ranks 94,800 Europeans, 48,870 North Africans and 16,044 Colonial natives are long service regular soldiers.

Colonial Budget (troops stationed in other colonies) :—

Officers	..	..	1,539
European other ranks	..	..	13,014
Colonial natives	..	..	37,114
Grand total Regular Army			620,217 all ranks.

The following categories are not included in the above totals :—

North African Irregulars 12,797

French *Gendarmerie* and *Garde*

Republicaine—

Officers 895

Other ranks 32,136

Syrian Legion (paid for by Syria) .. 6,000 approximately.

Agents militaries.

Civil employees.

(d) *Points of interest in the Budget.*

(i) Morocco.

The army in Morocco has been reduced by 3,000 regular soldiers, but three new irregular units (Goums) are being constituted.

The forces in Morocco are being organized in four military regions, with headquarters at Fez, Meknes, Taza and Marrakech, with an independent command at Casablanca. The first three will be divisional headquarters and the others mixed brigades.

(ii) The number of candidates for the Staff College has fallen off by 25 per cent. in 1927 compared with 1926, and it has been found necessary to accord special allowances to students.

A similar state of affairs exists at St. Cyr and the Ecole Polytechnique, the Sandhurst and Woolwich of France.

(iii) The contract for the French Military Mission in Brazil has been renewed. Appropriations are made for military attaches in Greece, Poland, Czecho-Slovakia, in case of the abolition of the existing military missions in these countries.

(iv) Of the 15,000 "Agents Militaries" required under the re-organization scheme, only 2,500 had been recruited by 28th November, with 1,500 waiting candidates.

(v) Special efforts are being made to encourage recruiting for the long service cadre in Algeria and Tunisia, and reservists will be trained for the first time in these colonies in 1928.

(vi) In 1928, 200,000 reservists of the 1922 Class and certain officers, non-commissioned officers and specialists of other classes, are to be called up for 21 days' refresher training, instead of the 25 days done by reservists in 1927. Owing to the unfortunate incidents in 1927, steps are being taken to attach sufficient regular officers and non-commissioned officers to the reservists for training, and arrangements are being made to see that the time of the reservists is better spent and that a higher standard of comfort obtains in the training camps.

(vii) By 31st December, 1927, 58 mobilization centres were actually working ; 57 further centres were formed on 1st January and 45 more centres are to be constituted by 1st August, 1928.

Army Reorganisation.

The Recruiting Law has passed the Chamber and now goes before the Senate. After some argument, the Government accepted a clause making one year's conscript service operative for the contingent called up in November, 1929. The date for the introduction of one year's service may, however, be put back if the Government think it essential.

The Artillery School.

A notification in the *Bulletin Official* of 31st December 1927, announces the amalgamation of the Artillery School at Fontainebleau and the Motor and Searchlight School at the same place. The whole will be known as *L'Ecole d'application d'Artillerie*.

Infantry Officers Promoted from the Ranks.

A decree of 15th November, 1927, notifies that in future the course at the Infantry School, St. Maixent (school for non-commissioned officer candidates for infantry and tanks), will last two years instead of one. In future, candidates will have to have at least one year's service in the rank of serjeant before admission ; in the past candidates were required to have spent at least two years in this rank. It is hoped by this measure to meet the shortage of officer candidates and to improve the standard of those trained at St. Maixent considerably.

The course is now of the same duration as at St. Cyr.

Communist Activities in the Army.

Editors of various Communist papers have again been sentenced for publishing articles inciting the armed forces to mutiny.

Prohibition in the French Army.

Considerable indignation has been aroused amongst wine-growing interests in France by an order of the General Officer Commanding 5th Army Corps, forbidding the sale of white wine to soldiers in the command.

FRANCE.

FEBRUARY 1928.

Army Re-organization.

(a) Disbandment of infantry divisions.

Amendment to Monthly Intelligence Summary, Vol. 12, No. 1, November, 1927, page 13—

The 31st Division (Montpellier) has not been disbanded.

(b) Progress of legislation.

The law relative to the cadres and effectives of the army, which supplements the law for the general organization of the army and the recruiting law, has now been passed by the French Chamber. The recruiting law has passed the Senate.

(c) Pre-military training establishment (*preparation militaire*).

In consequence of the re-organization, the establishment of non-commissioned officer instructors for the training of youths prior to their military service has been under discussion.

A provisional establishment, until the final passing of the Cadre and Effectives Bill, has now been issued, allotting the following number of non-commissioned officers for such training :—

For physical training	..	..	338
For general training—			
Infantry ..	..	..	200
Tanks ..	..	..	5
Artillery ..	..	..	36
Cavalry ..	..	..	11
Engineers	..	..	8
Total	..		598

These non-commissioned officers will be borne by units in excess of establishment. They will be attached to corps districts and to physical instruction centres in departments.

(d) *Non-commissioned officers' statute.*

Frequent mention has been made of the difficulties experienced in obtaining sufficient long-service non-commissioned officers for the French Army, and the large number of additional regular non-commissioned officers required under the re-organization scheme.

On 23rd December, the Chamber passed a law modifying and improving the status of non-commissioned officers in the French Army. The law applies to regular non-commissioned officers of the Metropolitan and Colonial Army and to the *Gendarmerie*.

This non-commissioned officers' charter was passed by the Chamber without discussion; it has not yet been considered by the Senate. It appears to be popular with the army.

This law forms part of the scheme for encouraging recruiting for the professional cadre of the army. In brief, it provides for the formation of a corps of regular non-commissioned officers with over 4 years' service, consisting of :—

Sergents.

Sergents-chefs.

Adjudants.

Adjudants-chefs.

With definite promotion rules, eligibility to pension, and post-service employment.

Non-commissioned officers will be compulsorily retired, with pension, at the following ages :—

<i>Sergents</i>	..	..	36
<i>Sergents-chefs</i>	..	..	39
<i>Adjudants</i>	..	..	42
<i>Adjutant-chefs</i>	..	..	45

Certain categories may be retained up to 50 in the case of *sergents* and *sergent-chefs*, and 55 in the case of *Adjudants* and *Adjudants, chefs*. Non-commissioned officers retired on pension belong legally to their old class in the reserve.

(e) *Recruiting of Regular non-commissioned officers.*

			1926.	1927.
Engagements	..	..	5,712	13,000
Re-engagements	..	..	4,000	12,000
Totals	..	..	9,712	25,000

It is stated that the increase in 1927 is due to improvement in conditions of service and not to the condition of the labour market in France. It is anticipated that the "non-commissioned officers character" referred to above will still further improve recruiting in 1928.

The Law for the General Organization of the Nation in the Time of War.

See Military Intelligence Summary, Vol. 10, No. 4, February, 1927, page 147.

This law has now been passed by the Senate, but 75 per cent. of the articles have been considerably amended during the discussion in [the Upper House, and the law will now have to be reconsidered by the Chamber. It is doubtful if any further progress can be made before the French elections in April.

Training of the French Army (preliminary training and reserve officers).

The following extract is from a speech by M. Painlevé, the Minister for War, at a demonstration by the National Federation of Societies of *Education physique et de preparation au service militaire de France et des Colonies* :—

It is necessary that the year spent with the colours by a man should in future be devoted entirely to his training as a soldier. It is desirable that the man should join his regiment, therefore, having already received a suitable gymnastic, sporting and preliminary military training.

In addition, with short service, it is essential that reserve cadres should continue their training. The present situation is satisfactory. There are now 40,000 officers in France who have registered to undergo courses for reserve officers. Of these 16,000 are in the Paris district. The number who take a great deal of trouble and follow the courses has doubled during the last few months. It has been necessary to double the teaching staff of regular officers to cope with the rapid increase in numbers.

FRANCE.

MARCH 1928.

Army re- rganisation.1. *The progress of the reforms.*

The dissolution of the French Parliament and the consequent halt in Parliamentary discussions on army reform, gives an opportunity to review the progress made since the summary published in Monthly Intelligence Summary, Vol. X, No. 4, February, 1927, page 147.

In addition to the main Law on the General Organization of the Army, the Recruiting Law, the Law of Cadres and Effectives and the N.C.Os. Charter have now passed through both Chambers. Further legislation will be necessary to settle certain administrative problems.

The essential changes in organization and establishments have been carried out for some months.

The age for military service is being gradually raised from 20 to 21.

The period of conscript service will be reduced to one year for the contingent called up in November, 1929, provided the necessary conditions as to the enlistment of the supplementary regular personnel have been fulfilled.

2. *Peace organization.*(a) *Designations.*

The French Army remains divided into two categories :—
Metropolitan units, which are either white or North African.
Colonial units, which are either white or colonial native.

For budgetary purposes there is a different division :—

All units (whether Metropolitan or Colonial) stationed in France, Rhineland, Syria, North Africa and China, are paid for by the Metropolitan Budget.

All units (whether Metropolitan or Colonial) stationed in the other Colonies, are paid for by the Colonial Budget.

The above designations are apt to be confusing, and for strategic questions the French Army is best considered under the following headings :—

Forces du Territoire (French units stationed in Europe).

Force Mobile (Colonial Expeditionary Force stationed in Europe).

Forces d'outre-mer (overseas garrisons).

(b) *Forces to be maintained in France and Rhineland in peace.*

Twenty-one corps headquarters (20 corps regions and the colonial corps).

Twenty-six infantry divisions, comprising :—

<p><i>Forces du Territoire.</i> One division is raised in each corps region.</p>	6 reinforced infantry divisions, each of 9 battalions (for eastern frontier corps regions). Units in these divisions are on a higher establishment.
	2 Alpine infantry divisions, each of 12 battalions (for the Italian frontier).
	12 normal infantry divisions, each of 9 battalions (stationed in the interior). One company per battalion or one battalion per regiment are cadre units in peace.
<p><i>Force Mobile.</i> Available for overseas expeditions.</p>	2 North African infantry divisions, each of 12 battalions.
	2 mixed colonial native divisions, each of 12 battalions.
	1 Indo-Chinese Malgache <i>Groupeement</i> (equivalent to a division) of 12 battalions.
	1 white colonial depot division of 9 battalions.

Twelve-battalion infantry divisions are organized in two infantry brigades per division.

5 cavalry divisions. The number of cavalry divisions may be increased by decree. No definite organization for a cavalry division is laid down in the laws, as cavalry organization is in a state of flux. Each cavalry division will have an infantry battalion (*Battalion Allege*) transported on carriers, formed of cavalry personnel.

3 air divisions. The maximum number of army air squadrons is not laid down in the laws. The French Government are thus able to increase the strength of the air arm by decree,

as personnel and material become available. The original bill envisaged 136 squadrons in place of the existing 132.

Units of the General Reserve, which in war are allotted by G. H. Q. to formations as required. These comprise tank regiments, the mass of heavy and medium artillery, and a proportion of *Portée* field artillery regiments. Also machine-gun battalions, which are formed on mobilization.

Garrisons of the following fortified regions :—

Nice.
Grenoble.
Belfort.
Strasbourg.
Metz-Verdun.

Each fortified region is allotted in peace one foot artillery regiment ; some 30 foot batteries will be maintained in peace.

(c) *Overseas Garrisons.*

(i) *North Africa.*—A large proportion of the overseas army is stationed in North Africa. The forces in North Africa are organized in divisions and mixed brigades, but these formations correspond more to our military districts in India than to war formations. They are to be located as follows :—

Algeria	..	3 infantry divisions.
Tunisia	..	1 infantry division.
Morocco	..	3 infantry divisions (1 formed of Colonial units) and 2 mixed brigades.

These formations will include :—

31 infantry regiments (approximately 93 battalions).

4 artillery regiments (with 16 *groupes*).

(ii) *Other Colonies.*—Considerable garrisons are maintained in—

Indo-China	..	..	26 infantry battalions.
West and Equatorial Africa	..	..	Equivalent of 20 infantry battalions.
Syria	..	..	14 " Regular " and 7 Syrian infantry battalions.
Madagascar	..	..	10 infantry battalions.

The figures given are the existing garrisons.

3. Peace establishments.

French Regular Army.—

Regular officers	28,800
Long service white other ranks	106,013
White conscripts	239,994*
Foreign Legion	16,000
Long service North African other ranks	64,479
Conscript North African other ranks	29,699
Long service Colonial native other ranks	49,244
Conscript Colonial native other ranks	34,340
<hr/>	
Total	568,569

Thus of a total establishment of under 570,000, 28,800 officers and 235,000 other ranks are regular long service personnel.

Semi-military personnel.—

<i>Gendarmerie and Garde Republicaine</i>	45,000
<i>Agents Militaires</i>	15,000
Army civilian employees	30,000

Irregulars.—

North African irregulars (paid for by the Metropolitan Budget) (present establishment)	12,797
Syrian levies (paid for by Syria) (present strength)	6,000

4. Peace distribution.

The peace distribution of regular other ranks of the French Army will be as follows :—

France—

<i>Forces du Territoire</i>	276,937
<i>Force Mobile</i>	70,637

347,574

Overseas	192,195
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Total 539,769

Of the 106,000 white French long service other ranks, there will be stationed in France (*Forces du territoire* and *Force Mobile*)—

56,248 in combatant units.

11,931 in services and departments.

* The annual class may actually be as strong as 250,000. In the 5 years from 1935 to 1941 the annual class will fall far below this figure, owing to restricted births and the high infant mortality in the war years. In 1937/38 the actual available contingent will only be 112,000. By gradually again lowering the age for military service during the lean years, the French hope to maintain the strength of the white annual contingent at from 180,000 to 200,000.

Reorganization of the Frontier Defences

See Military Intelligence Summary, Vol. XI, No. 6, October, 1927, page 218.

1. *Creation of technical inspectorates of fortification works.*

(a) The Commission for the organization of frontier defences has reported that their plans are sufficiently advanced for work to be begun.

(b) For the current year work will be limited to the XX and VI Corps regions, that is, on the front, Selestat—Strasbourg—Wissembourg—Thionville—Mezieres—Rocroi.

No work is at present to be undertaken in the VII region (Belfort area), but a similar organization is to be set up there as soon as work is to be begun.

(c) The task of preparation and execution of the fortifications is too great for the existing Engineer personnel of the regions involved. Hence the *Journal Officiel* of 9th February, 1928, contains a Presidential decree authorizing—

(i) The appointment of a technical inspectorate and 2 directorates of fortification works.

(ii) Additional pay for the Engineer officers and non-commissioned officers specially employed.

(d) The technical inspectorate is responsible for the co-ordination of all work. The 2 directorates formed will be established at Metz and Strasbourg. It is noteworthy that one of the reasons stated for the issue of additional pay to the officers employed is that work is to be continuous, by night and on Sundays; the continuous pouring of concrete is specially mentioned in the preamble to the decree.

2. *Creation of a service of fortification material.*

The *Bulletin Officiel* of 11th February contains a decree forming temporarily a *Service des matériels de la fortification*, to work under the *Section Technique du Genie* and the 4th Directorate of the Ministry of War.

This organization will deal with the study, manufacture and ordering of engineer material for the fortifications.

Shortage of Officers.

See Military Intelligence Summary, Vol. XI, No. 1, May, 1927, page 9.

Ecole Polytechnique.

In a report, dated 5th March, 1928, by the Minister of War to the President of the Republic, it is stated that the measures so far taken, increase of pay and allowances, and the extension of the age limit for entry, have failed to provide the necessary number of candidates from the *Ecole Polytechnique* for service under the Government, viz., for the Artillery, Engineers and Civil Engineering Departments. Students from the *Polytechnique* still prefer to enter private industry.

A Decree was issued on the 5th March, 1928, with the object of increasing the number of candidates for Government Service, admitting an additional number of students to the school annually in order to make up the numbers required. Students thus specially admitted will be required to sign a contract to serve the Government for six years. The number of special entries will be fixed each year according to requirements.

General Election.

The French Parliament adjourned on 17th March.

Elections for the Chamber will be held on 22nd April (first ballot) and 29th April (second ballot).

Parliament will reassemble on 1st June.

Proposed Trans-Saharan Railway.

1. The French Government recently obtained the consent of the Chamber to a law giving authority for the setting up of a commission for the study of the construction of a railway line uniting French North and West Africa.

2. The political and military value of such a line is admitted. Its economic value, however, is still uncertain. The commission is to study the question of the Trans-Saharan railway under the following headings :—

- (a) *Technical*.—The location of such a railway line, its transportation capacity, method of traction (steam turbines or Diesel engines are mentioned in the preamble), water supply, measures to be taken for the security of the line, etc.

(b) *Economic*.—The possibility of the development of the areas served, and a forecast of the traffic.

(c) *Administrative and Financial*.—A forecast of the possible financial return of the railway, and recommendations as regards its construction and exploitation.

3. The preamble to the bill admits the difficulty of the financial aspect of the construction of the line. It is however suggested that deliveries in kind, obtained under the Dawes Scheme by France, may assist in the solution of the problem. It is also pointed out among the engineering problems, that if the line is to be built from the Algerian end only, it will take considerably longer than if construction can also be pushed forward from the Niger, with a base on some point on the Atlantic coast.

4. The expenses of the commission are estimated at 11,500,000 francs (about £92,000). This amount is to be provided by the Governments of France, Algeria, French West Africa, Morocco, Tunisia, and by the French Railway Companies interested in the construction of the line. The expenditure is to be divided between the years 1928 and 1929. It is anticipated that the commission will complete its studies by the end of 1929.

FRANCE.

April 1928.

Army reorganization.

In continuation of Military Intelligence Summary, Vol. XII, No. 5, March, 1928, page 176.

1. *Periods of Service.*

The period of conscript service for white personnel will be :—

With the colours 1 year.

En disponibilité (*e.g.*, liable to recall without the order for mobilization having

been given) 3 years.

1st Reserve 16 years.

2nd Reserve 8 years.

Total military liability .. 28 years.

The period of conscript service varies slightly in the different colonies, but the average is 3 years with the colours and 12 with the reserve, except Algeria, where conscript colour service is for 2 years only.

Officers passing through St. Cyr and the Medical School, and any candidates from the Ecole Polytechnique admitted above the normal age limit, are bound to serve 6 years as regular officers in the army.

2. *The training of the Army.*

(a) *General.*

One of the main underlying reasons for the reforms is a desire to raise the general standard of training of other ranks in the French [Army, which has certainly deteriorated since the war.

In the past few years a great deal of the conscripts' time has been spent on regimental and garrison employ ; the time devoted to field training has been very short, and the strength of units insufficient to give useful results.

The increase in long service white personnel, the enlistment of additional *Gardes Republicaines* for guard work and police duties, of *agents militaires* to act as clerks and administrative personnel, and of civil employees to relieve serving soldiers from various domestic and menial duties, should enable the long service non-commissioned officer to be freed for his duties as an instructor, and the conscript to be made available for real training.

(b) *Pre-military Training.*

Considerable attention is being paid in France to pre-military training (*preparation militaire*), e.g., the training of youths before they join the colours.

A special law dealing with this subject is to be laid before Parliament, in amplification of the reorganization scheme.

This pre-military training is carried out by the Federation of Societies for the *Education physique et de preparation au service militaire de France et des Colonies*. Some 600 long service non-commissioned officers are seconded to carry out such instruction, which includes gymnastic, sporting and elementary military training.

At certain higher educational establishments, courses of higher pre-military training (*preparation militaire superieure*) are held. Successful students can obtain a *brevet de preparation superieure militaire*.

(c) *Regular officers.*

There is no change in the appointment of regular officers, *i.e.*, from the Military Schools and by the promotion of selected non-commissioned officers.

All officers in future will pass through two stages before joining units for duty :—

Preliminary training at the *Ecoles de Formation*, *e.g.*, St. Cyr, the Ecole Polytechnique, or the schools for non-commissioned officer candidates for regular commissions.

Further training at the *Ecole d'Application* of each arm, or sub-division of each arm.

As a consequence, an *Ecole d'Application* is being formed for the infantry. In future, commissions in all arms will be given to candidates from either St. Cyr or the Ecole Polytechnique, and there will be no specialization at these schools.

Education (*Perfectionnement*) during an officer's service will be continued by the *Cours Practiques de tir*, of which at present four are in existence, for infantry, artillery, A. A. defence, and aerial bombardment. In addition there are to be specialist schools, of which the following are enumerated in the laws :—

Signal School.

Motor and Searchlight School.

School for Aviation Mechanics.

Mountain Warfare School.

Physical Training School.

Three schools for special North African services.

Higher military education is ensured by—

The Staff College.

Centre des hautes études militaires.

Centre d'études tactiques d'artillerie.

Ecole superieure technique.

Ecole superieure de l'intendance.

In order to stimulate the technical education of officers, the War Ministry can issue *brevets techniques* and *brevets supérieures techniques* to those specially qualified. These correspond to some degree to the *brevets* obtained by Staff College graduates in France, and the holders will be entitled to certain additional allowances.

(d) *Reserve officers (officiers de complément).*

It is intended that Reserve officers should be trained at the *Ecoles d'application* of their arm (*see below*), but for a shorter period than regular officers.

Students at higher educational establishments are given a military training which prepares them for the rank of Reserve 2nd Lieutenant. Those who successfully pass an examination are appointed Reserve 2nd Lieutenant on joining the Colours. They spend a period at the *Ecole d'application* of their arm (normally six months) and complete their year's service as an officer of a unit.

In addition, holders of the *brevet de préparation militaire supérieure* are posted on joining to training platoons for Reserve officer candidates, which are formed in various garrisons. After 5 months, successful candidates are appointed Reserve 2nd Lieutenants, and complete their period of compulsory service in this rank. Reserve officers are to be called out for periods of training up to a maximum of 4 months during their liability to service. In addition, *Ecoles de perfectionnement* are to be formed in each region, at which Reserve officers are trained at times fixed in consultation with the associations of Reserve officers. The Minister for War stated that 16,000 Reserve officers in Paris had registered to attend voluntary courses.

In addition to compulsory periods of training, Reserve officers may serve for 15 days with pay, in any year in which they are not called up for training. Flying personnel may carry out voluntary training periods of 30 days each.

(e) *Long service non-commissioned officers.*

It is hoped to obtain, as heretofore, a large number of the long-service non-commissioned officers from boys trained at the Preparatory Military Schools, where sons of non-commissioned officers are educated up to the age of 18, and then engage for 5 years with the colours.

Instruction in the Army is carried out in non-commissioned officers training platoons in units. Specialist training to non-commissioned

officers is given at the *Ecole d'application* of the arm. The law for the general organization of the Army permits the creation of training or refresher centres for long-service non-commissioned officers.

(f) *Reserve non-commissioned officers.*

With 1 year's service, considerable difficulty is anticipated in the proper training of non-commissioned officers for the Reserve. Training is to be carried out in unit training platoons. Promotion to corporal may be made after 5 months' service in the ranks ; holders of the *brevet de preparation militaire* may be appointed senior corporals direct after the same period. Promotion to serjeant may be made at the end of 1 year's service. Training centres for Reserve non-commissioned officers may be created.

(g) *The conscripts of the Annual Contingent.*

The Laws contain stringent provisions to prevent conscripts being taken away from their units for employ. They are to remain with their units throughout their colour service, except when detached for special technical training or specialist work.

The system envisages the following organization in the infantry in the Interior :—

Training units (*Units d'instruction*), in which conscripts serve for their first 6 months.

Trained units (*Unités de manœuvre*), in which conscripts serve for the last 6 months.

Units in cadre.

This system can be adopted either within the battalion or the regiment.

In the first case, the battalion would comprise 1 recruit company, 1 trained company and 1 company in cadre. At each half-yearly incorporation of conscripts, the rôles of the companies would change. The objections to this method are that for the training of larger units, composite battalions would have to be formed by amalgamating companies of trained men from all the other battalions in the regiment. No active battalion would ever be able to carry out training with all its companies at the same time. In addition, regiments in the frontier regions and in occupied territory have no units in cadre ; thus all companies in a frontier regiment will have a proportion of recruits

and no unit will be absolutely ready to take the field, although in the most exposed position.

In the second case the cadre battalion system has more advantages, as it enables training to be carried out by integral battalions, and also one battalion in each regiment is ready to take the field at once. This system makes the garrisoning of occupied territory easier, as only battalions of trained men need be stationed on the Rhine.

It has not yet been definitely decided which system is to be adopted.

(h) *Reserve training.*

Each reservist is to carry out training as follows :—

<i>En Disponibilité</i>	..	..	1 training of 3 weeks.
1st Reserve	..	..	2 trainings, 1 of 3 weeks and 1 of 2 or 3 weeks.
2nd	..	..	1 training of 7 days.

Maximum Reserve training—63 days.

All the Reservists of an annual class, apart from certain specialists will be called up for Reserve training together. Reservists will be trained with the same unit with which they carried out their colour service, and Reservists who were trained in the same company, &c., will be kept together during Reserve training.

Reserve training is in principle to be carried out during manoeuvres, and, if possible, in higher formations constituted as on mobilization.

3. *Mobilization and expansion for war.*

(a) *General.*

The reforms aim at providing :—

- (i) An adequate covering force in the frontier regions in peace.
- (ii) The rapid expansion of the active army on mobilization, to provide a screen behind which the nation in arms can mobilize in security.

(b) *The Covering Force (La Couverture).*

Under the Treaty of Versailles, France can maintain an army of occupation in the Rhineland until 1935. The present strength of the Army of Occupation is 4 infantry and 1 cavalry divisions.

As stated in M. I. S., Vol. XII, No. 5, March, 1928, page 147, in principle one white infantry division is raised and stationed in peace in each corps region, and the total of 20 white infantry divisions cannot be exceeded.

In order to maintain the covering force, the laws provide that certain corps regions may in peace have their divisions withdrawn and stationed in the Rhineland or the frontier corps regions. The so-called *regions vides* will be those in the west of France.

For the present, 4 infantry divisions will thus be stationed outside their territorial regions, and allotted to the Rhine army. After the evacuation of the Rhineland, the 3 corps regions on the German frontier (VII Besancon, XX Nancy and VI Metz) will each be strengthened by a division on the higher establishment (*divisions renforcés*), drawn from the interior. In consequence the X Rennes and XI Nantes will be *Regions vides*; the XVIII Region Bordeaux will be garrisoned in peace by the Colonial Dep't Division.

As a temporary measure, the Rhineland divisions are grouped in two *Corps d'Armée de Marche*.

The covering force on the Italian frontier is assured by two Alpine divisions, both on a higher establishment.

(c) *Mobilization machinery in peace.*

Active units of the standing army (*Forces Permanentes*) are freed under the reforms of all duties connected with mobilization. These are carried out by 450 mobilization centres, staffed mainly by *agents militaires*, with a small staff of regular officers and long service non-commissioned officers.

These centres will carry out all administrative work in connection with mobilization as regards the provision of personnel and animals, and the storage and maintenance of material. On mobilization, the reserve units will actually be formed at the centres.

To provide continuity, each region commander has in peace two staffs :—

- (i) An active category, available for the mobilized higher formation in war.
- (ii) A territorial category, available for the staffs remaining in the interior on mobilization.

The region commander exercises in peace both the command of the troops in the region, and the territorial command. He may be designated to command a corps on mobilization; in this case he is replaced in command of the region by a general officer selected and prepared for this duty in peace.

(d) Mobilization procedure.

The 3 *disponible* classes can be called up at any time without issuing the order to mobilize.

The 16 classes of the 1st Reserve join the colours immediately the mobilization of their class is ordered.

The 8 classes of the 2nd Reserve are called up individually on mobilization.

(e) Expansion for war.

The following figures are taken from the debates in the French Chamber, and the mobilization time-table can only be taken as approximate.

(i) Mobilization of the Active Divisions (Forces Permanentes).

The 20 white active divisions are mobilized by calling up the three *disponible* classes, and withdrawing all men with less than six months' service.

(ii) Formation of Reserve Divisions.

One first line white reserve division is formed in each region on mobilization. A strong cadre is detached from each active division to mobilize the first line reserve divisions.

One second line white reserve division is subsequently formed in each region with older reservists. Cadres for these divisions will be obtained from mobile units of the *Garde Republicaine* and from long service non-commissioned officers employed in peace in administrative services.

Further expansion in France will depend on the mobilization of war industries.

(iii) Time-table of mobilization.

The 8 higher establishment infantry divisions of the covering force will be ready to move within a few hours of mobilization. They are, however, not at war strength in peace, and will take some days to be completed with personnel and animals.

The 12 lower establishment white infantry divisions should be ready to move by the 8th day of mobilization. Presumably the 5 Expeditionary Force divisions and the Colonial Dépôt division will be ready in less than the same period.

The 20 first line white reserve divisions should be ready in less than three weeks from mobilization.

The 20 second line white reserve divisions should be ready between the 3rd and 6th month after mobilization ; additional divisions from West Africa and other colonies should also be available in this period.

4. *Strength and composition of the field army.*

In the debates in the Chamber, the Chief of the General Staff stated that 30,000 men were required in the field army, for each mobilized division and its proportion of Corps, Army and G. H.-Q. troops.

For an initial army of 46 infantry divisions, the French will thus have to place about 1,400,000 in the field.

It must be realized that from the outset, the mobilized French Army will be an army of reservists, with a very low proportion both of long service non-commissioned officers and of serving soldiers of the annual contingent ; the proportion of long service personnel will be higher in the Colonial Expeditionary Force divisions.

In the 40 white divisions on mobilization there will be only—

39,597 long service non-commissioned officers in combatant units.

11,319 long service non-commissioned officers in administrative services, and

120,000 conscripts with over 6 months' service.

The remainder of the 1,200,000 required for these divisions, *i. e.*, over five-sixths of the force, will be reservists.

5. *Criticism of the reorganization.*

The following points merit consideration, especially if one remembers the short period of colour service and the very high proportion of reservists in the future mobilized French Army :—

- (i) 106,000 long service non-commissioned officers are generally acknowledged as insufficient for mobilization needs ; 150,000 are really required.

- (ii) By the provisions of the Law of Cadres and Effectives, the French General Staff have definitely adopted an army based on man power and on the fullest use of national reserves, as opposed to a small professional army and intensive mechanization. This apparent disregard of recent developments in mechanization is largely due to the expense involved and the impossibility of equipping a large army at the outset with machines. The new organization is, however, in theory, a distinct improvement, being based on sound and definite principles. At the same time it is intentionally framed so as to give the necessary elasticity for the increase or decrease, by decree, of certain types of units, as, for example, air squadrons, tank battalions and specialist units, and for the adoption of new ideas suited to modern war.
- (iii) The effectives available are insufficient for the number of units and formations laid down; this necessitates a certain number of units in each regiment being maintained in cadre in peace. This will be a source of weakness to the first line troops on mobilization.
- (iv) The value on mobilization of Reserve officers and non-commissioned officers, who will only have served 6 months as such in the "active army" is problematical.
- (v) In case of mobilization, insufficient stiffening by white men of native troops is provided for.
- (vi) The unequal incidence of colour service on whites and natives, being in the proportion of 1 year to 3 years, may cause trouble if it is exploited by propagandists.

The above points are realized by the French, and have been discussed in the Chambers and commented on in the Press.

6. Conclusion.

To sum up, the reorganization scheme as a whole has a sound frame-work, reduces the period of colour service of the individual, but retains his services in case of national danger for 28 years. It appears that by reversion to 20 years as the age for conscript service in 1935 and for the ensuing four years, the dangerous period due to war losses in 1914-18 may be tided over and the annual contingent kept nearly up to establishment. The *couverture* on the frontier in case of mobilization should be ensured by the active army, expanded

by the *disponibilité* classes. Colonial and overseas defence is arranged for on sound lines. The French claim that the organization is not aggressive, and is based on the democratic principle of the *nation armée*, besides showing a considerable reduction in peace time formations and effectives. An excellent organization for utilizing all national resources has been arranged and only awaits legislation by the passage of the "Law for the Organization of the Nation in time of War".

Reorganisation of the Frontier Defences.

See Monthly Intelligence Summary, Vol. XI, No. 6, October, 1927, page 218, and Vol. XII, No. 5, March 1928, page 150.

A Decree of 28th March, 1928, makes the following changes in the duties and constitution of the *Commission d'organisation des régions fortifiées* :—

- (1) The Commission is now charged with the supervision of all frontier defences, and not merely those of the north-east frontier.
- (2) The Inspector-General of technical artillery research and experiments is made a member of the Commission.

Communist Activities in the French Army.

In a debate in the French Chamber on 16th March, on the question of releasing imprisoned Communist Deputies, M. Barthou, the Minister of Justice, made an important statement as to the danger of Communist propaganda in the army, and in particular of a Communist party order to the party members to furnish information to the party headquarters regarding their military status and mobilization orders. M. Barthou said that "by centralizing the information thus obtained throughout France, the Communist party would be in possession of sufficiently precise details respecting mobilization to enable it to hinder its progress.....The Government are warned, and they have warned the Chamber: neither the Chamber nor the Government can now plead the excuse of ignorance. To yield would be to abdicate: to abdicate would be almost to betray the country. The Government will not abdicate."

The *Temps* of 20th March contained a short communiqué to the effect that "M. Barthou has conferred with the *Procureur Général* respecting the military information asked for from its adherents by the Communist party, in the circumstances which the Minister for Justice explained to the Chamber."

NOTES ON MILITARY REVIEWS.

"REVUE MILITAIRE FRANCAISE."

Published by Berger-Levrault, Paris. Price, 5·50 francs.

January, 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Part 1.)

The first instalment of a study of the organization of the battlefield in Champagne in 1914-18. Part 1 gives a brief outline of (1) the German offensive of September, 1914 ; (2) the French offensive of 1915 ; (3) the French offensive of April-May, 1917 ; (4) the German attack of 15th July, 1918 ; (5) the French offensive of 26th September, 1918.

2. *Anti-Aircraft Artillery—Its Employment and Reorganization.* By Commandant Vauthier.

The object of the article is to point out how simple anti-aircraft work is. It is contended that the rôle of anti-aircraft artillery is simpler than that of any other kind of artillery, and that anti-aircraft units require a smaller proportion of specially trained men, as they must be more reliant on mechanical devices for the efficacy of their fire. The question of depth in anti-aircraft defence and the protection of troops on the move are inadequately dealt with. The article savours of static warfare : it contains little of value.

3. *The 2nd Infantry Division of the Prussian Guard, 21st and 22nd August, 1914.* By Commandant Maury. (Concluded.)

This article, and the first part in the December issue of the "Revue," provide an interesting study of the difficulties of command in open warfare ; the lack of co-operation between divisions ; the maintenance of contact with the enemy ; the co-operation of artillery and infantry ; the execution of orders given by a higher commander who is not in touch with the situation. At one period on the morning of 22nd August matters were so confused that both French and German forces simultaneously withdrew from the battlefield.

4. *The Tangier Question.* By Commandant Galy.

The author commences by stating that the Tangier question has been invented by diplomats. He gives a sketch of the history of

Tangier, and of the negotiations and successive international agreements at the beginning of the 20th century, which led to the treaty of 1923 between Great Britain, France and Spain. A summary of this treaty is given. The article concludes with a statement of the claims of Spain and ambitions of Italy. The author trusts that France will be supported in her attitude by the firmness of Great Britain.

5. *In French Morocco in 1925 ; The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (Continued.)

This instalment deals with the problems of (1) the building up or reorganization of a front ; (2) the assumption of the offensive ; and (3) the reorganization of the army and the absorption of reinforcements from France.

February, 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Part 2.)

Part 2 consists of a record of the work carried out in 1915-17, in preparation for the offensives on the Champagne front. Some statistics are given in connection with the development of railways and roads, the supply of ammunition and engineer stores, the provision of hospitals and the means of evacuation of wounded, of camps and water supply. No deductions are made. The record does not mention the precautions taken against air attack or against gas. Nor is any mention made of the difficulty of concealment from the air of preparations carried out on the scale described.

2. *The Lessons of the Moroccan War (1925-26) on Questions of Aviation.* By Colonel Armengaud. (Part 1.)

The author is a leading light in French aviation. He was Marshal Foch's air adviser in 1918. He made a considerable reputation in Morocco in command of aviation, during the campaign dealt with in these articles.

In this first article he endeavours to draw conclusions from recent experience in Morocco which may be applicable to European warfare of the future. He emphasises the value of aircraft as *l'arme de couverture par excellence*, and the possibility of aircraft being rapidly concentrated at the decisive point. For efficient action air units must be mobile ; they must be capable of carrying their ground personnel

and the stores required for one or two weeks' action by air. Hence he advocates the requisitioning of civil aircraft as carriers for fighting units. He estimates that, given favourable weather conditions, the whole of the aircraft in France can be concentrated on the frontier in two days, and that the air forces from North Africa could join them in three days, staging in Corsica on the way. It is interesting to note that, in his plans for the future, he visualises five French armies deployed between the Vosges and the Sambre. The V Army taking the offensive on the left, supported by the IV Army immediately to the south. He notes the necessity of motor-cars at advanced aerodromes for communication purposes. He emphasises the special necessity, at the outset of operations, of concentrating all air-power against the main objective, in spite of the calls which will be made on it to undertake various other missions.

3. *The Serbian Victories in 1914.* By Lieut.-Colonel Desmazes and Commandant Naoumovitch. (Continued.)

Previous parts of this article appeared in the September, October, and November, 1927, issues of the "Revue Militaire Française."

This instalment deals with—

- (1) The re-organization of the Serbian and Austro-Hungarian forces on the Drina (frontier) after the Austrian defeat in the Tser region.
- (2) The Serbian offensive in Srem (Syrmia), 6th-14th September, 1914.
- (3) The beginning of the second Austro-Hungarian offensive in Serbia, 7th-15th September, 1914.
- (4) The Serbian offensive in Bosnia, 15th September-25th October, 1914.

4. *In French Morocco in 1925: the Restoration of the Military Situation.* By Captains Loustau-Lacau and Montjean. (Continued.)

This instalment begins with the appointment of Marshal Petain to the general direction of operations in Morocco. On 21st August, at a meeting at Algeiras with General Primo de Rivera, he agreed on a combined plan with the Spanish forces. The French operations consisted of—

- (1) A preliminary advance in Beni Zeroual territory, immediately north of Fez, to obtain a suitable line of resistance north of the river Ouergha, and to gain a jumping off position for further operations.

- (2) A main operation against the Ouriaghel and Touzine tribes north of Taza, from which Abdel Krim drew his stoutest supporters. A result of the latter operation was that the French were able to gain touch with the Spanish troops based on Melilla. Two oblique aeroplane photographs reproduced are reminiscent of the north-west frontier of India.

5. *Events in China: 6th April-15th December, 1927.* By Commandant Girves.

A clear and concise record of events in China, in which the bewildering moves of the various Chinese generals are correlated, and an attempt made to put them in some sort of perspective. The author begins with a description of the Soviet organizations under Borodin, and their activities. He emphasises the fact that as soon as the Southern leaders got rid of the tutelage of Borodin, victory deserted them. It is not one of the habits of a Chinese general to fight for a principle, even though the principle be that enunciated by Karl Marx. He concludes that the Russians did not succeed in gaining the sincere friendship of the Chinese any more than any other Power has done, but once foreign influence is withdrawn, China falls back into disunion and disorder. He refers to the landing of Japanese troops to safeguard Japanese interests in Shantung, but nowhere in the article is British action at Shanghai or elsewhere mentioned.

The author belongs to the General Staff, "Ministère de la Guerre."

Reviews.

General Rampont's article in the "*Revue des Deux Mondes*," "*Cavalerie aux Armées*," summarised on page 248, has been the subject of much discussion among officers of the French Army.

March 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Part III.)

On the 12th September, 1918, the French Fourth Army received the order to prepare for the break through of the German front from the Suippes to the Aisne, with the object of exploiting success towards Vouziers. This instalment gives an outline of the administrative measures taken in connection with railways, roads,

supply, ammunition, transport, artillery and engineer stores, evacuation of sick and wounded, traffic control, water supply, &c. The influence of communications on the success of the operations is emphasised.

2. *In French Morocco in 1925. The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (Part III.)

Bad weather made operations impossible after the beginning of October. Heavily equipped European troops could not compete during the winter months in rain, mist and mud, against the mobile Riffi. Before leaving on 20th October, Marshal Petain arranged for pressure to be maintained on the enemy by political means, by constant raids, by special light detachments and by friendly tribes. These measures were carried out by General Naulin. The importance of the maintenance of the moral of the troops during the winter months is emphasised. The expansion of the material resources of the French army, the development of communications and the provision of accommodation and necessities of life, are described.

3. *Leadership and War.* By Commandant de Gaulle.

An interesting analysis of the qualities required of a leader in war ; the difficulty of selection of leaders in peace time ; and the present day tendencies which militate against the production of commanders.

4. *The Serbian Victories in 1914.* By Lieut.-Colonel Desmazes and Commandant Naoumovitch. (Part V.)

At the end of October the strategic situation of the Serbian Army was a precarious one. The Austrians threatened with their superior resources in artillery, to crush and turn the Serb right (northern) flank. The Serbs were forced to retire. Exhaustion, lack of food, bad weather and the serious moral effect of fleeing refugees, made the retirement a difficult one. From 10th to 15th November, the Austrians were able to advance to the line of the River Koloubara. The Serbians fought on this river line from 17th to 22nd November. Continuous fighting from 22nd to 28th November led to the evacuation of Belgrade, the transfer of the Serbian Government to Nish, and the further retirement of the army.

5. *The lessons of the Moroccan War (1925-26) on questions of aviation.* By Colonel Armengaud. (Part II.)

Colonel Armengaud asks what is the proportion of aircraft to other arms in a European war? He considers from experience in Morocco that the proportion of aircraft in future wars will be much greater than ever used before. He then discusses the relative effect of aircraft assisting land forces, and aircraft attacking the back areas of an enemy independently. He emphasises that, to obtain success in war, it is essential that the air objective and the military objective must be the same. Air action must rapidly be followed by land operations. He then gives his opinion on the rôle of "*aviation de ligne*," in other words, purely offensive aircraft as distinguished from aircraft with specialised rôles, such as artillery observation, reconnaissance, &c.

6. *Field works in the German Army.* By X.

The anonymous author draws attention to the great amount of earth works and field defences carried out by the Germans during the war of 1914-18. The Germans have not forgotten the tradition which they established during the war, of efficient field fortification. Their training now includes a great deal of practical instruction in field works, more especially in the art of camouflage and the crossing of rivers.

The article states the amount of money voted for 1928 for instruction in field works for field engineers and infantry.

April, 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Conclusion.)

This instalment gives tables of supplies and transport, and shows the organization for ammunition and engineer supplies and the evacuation of wounded. A section is also included on the reorganization of communications and the work of the supply services during the battle, from 26th September to 22nd October 1918. The conclusions drawn by the author from his study are:—(a) That a modern army can, with difficulty only, operate further than 70 kms. from its railhead. (b) The results obtained in the various phases of a battle depend directly on the degree of preparation made. (c) Finally, success depends on the close collaboration of staff and supply services.

2. *In French Morocco in 1925. The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (Part IV.)

The authors discuss the necessity for and the difficulties of training troops engaged in this type of warfare. They emphasise the most important rôle of the infantry and more especially of the individual man. In European warfare individual effort is absorbed and carried forward in the mass. In tribal warfare in Morocco, on the other hand, success depends on the confidence, physical fitness and military training of the individual soldier. The conditions of Moroccan warfare relegate the artillery to a secondary rôle; 65, 75 and 100 mm. pieces on pack gave the best results against fleeting targets. The rôle of cavalry similarly was limited to close protection, except under the open conditions of the Chaouia, where cavalry action on a wider scale could be contemplated. The action of tanks appears to have been very limited. Aviation rendered much help to the troops; this is dealt with in a later article. Mobile columns of 6 to 7 battalions, 2 batteries and a squadron, is recommended as most suitable for this type of warfare.

3. *Landings on Hostile Coasts.* By Colonel Alléhaut. (Part I.)

The author points out the necessity for the study of such operations, in case they may have to be undertaken during the course of a campaign. The main heading for the preliminary plan are stated and briefly discussed. The necessity for air superiority is not emphasised, and it is doubtful whether the author sufficiently realizes its importance and the difficulties of secrecy.

4. *Serbian Victories in 1914.* By Lieut.-Colonel Desmazes and Commandant Naoumovitch. (Conclusion.)

The Serbian counter-offensive of 2nd-15th December, 1914, and the recovery of Belgrade are described. The precarious strategical situation of the Serbs in 1914 should be better known, but the wretched quality of the sketch maps accompanying this narrative makes it difficult to follow the operations, from which otherwise many useful lessons could be drawn.

5. *Lessons of the Moroccan War (1925-26). On Questions of Aviation.* By Colonel Armengaud. (Part III.)

Details of the intimate co-operation of aviation with other arms are given. The form of warfare was peculiar owing to the nature of

the country, and the armament and characteristics of the enemy. Colonel Armengaud deduces, however, that many lessons learnt would be of value in European warfare in such regions as the Vosges, Black Forest, Jura and Alps.

6. *German Permanent Fortifications in 1927.* By C. L. L.

An interesting summary of the German fortifications in 1914 and of what remains of value in 1927. By the Treaty of Versailles, the Germans have lost the possibilities of manœuvres with which their fortifications endowed them on the Western front. On their Eastern frontier, Thorn and Posen have become Polish, but East Prussia is still strongly defended by the fortified barrier of the Mazurian Lakes and by the fortress of Königsberg. The Southern frontier has become important on account of the creation of Czecho-Slovakia ; here the old fortresses of Ulm, Ingolstadt and Königstein, though capable of a certain degree of resistance, have not been modernized.

GREECE.

Training.

The French Military Mission continued its work throughout 1927 and as a result there has been a distinct improvement in the standard of proficiency of the Greek regimental officer. The Greek Government has signed a new contract with the mission prolonging its engagement until 1st October, 1929. Under the new contract the number of French officers is to be reduced from 16 to 10 ; other conditions remaining unchanged. General Girard, the head of the mission, is due to return to France next June and his successor, General Brallion, has arrived in the country.

No manœuvres took place in 1927, nor, for financial reasons, are any likely to be held for some time. The usual garrison exercises were carried out and staff rides were organized by the French Military Mission.

Organization.

Official decrees have been published abolishing the 5th Corps Headquarters, the 7th Division and certain small units. The army thus returns to a four corps organization similar to that which obtained before General Pangalos created the 5th Corps. The latter has had little more than a theoretical, paper existence, and the same applies

to other units which have now been abolished. The net result, therefore, is that the Greek army remains at much the same strength as before. According to the official returns the present peace strength of the army is 79,000, but it is extremely doubtful whether this is a true figure; any estimate must be largely a matter of guess work and it is considered that for practical purposes the peace strength may be taken as between 60,000 and 70,000.

HUNGARY.

Army Estimates.

The Hungarian Army Estimates for the financial year 1928-29 amount to 132,836,050 pengö (£4,750,931) representing an increase of 12½ per cent. over the sum voted for the preceding year. The largest increase is under the heading of Pensions.

ITALY.

Army Estimates.

The Italian Army Estimates for 1928-29, as compared with those of the preceding year, are as follows:—

—	1928-29.	1927-28.	Difference.
	Lira.	Lira.	Lira.
Ordinary	2,403,660,300	2,432,731,300	—29,071,000
Extraordinary	248,967,745	341,927,745	—92,960,000
Total	2,652,628,045	2,774,659,045	—122,031,000

(The value of the lira is 92 to the pound sterling.)

It is officially stated that the decreased estimates are rendered possible by a reduction in the cost of living. A supplementary vote of 100,000,000 lira has, however, already been approved for the provision of technical military material; if this is taken into account the actual expenditure will remain approximately the same as in previous years.

The above totals are made up of the following main items:—

—	1928-29.	1927-28.	Difference.
	Lira.	Lira.	Lira.
(a) Army	1,784,780,300	1,806,981,300	—22,201,000
(b) Carabinieri	452,750,000	511,000,000	—58,250,000
(c) Pensions, &c. ..	415,097,745	456,677,745	—41,580,000
Total	2,652,638,045	2,774,659,045	—122,031,000

General.

No radical change in the organization or administration of the Italian Army has taken place during the past year.

In view of the repeated changes which have done so much to hamper efficiency since the war, this simple announcement is of considerable importance.

The distribution of army corps was published in the Summary for February, 1927. To this list must now be added a new XI Army Corps, with headquarters at Udine, consisting of three divisions withdrawn from IV Corps (one division) and V Corps (two divisions). Corps artillery for this new army has not yet been formed.

Perhaps the most important event of the year with regard to Italian military organization is the announcement recently made by Signor Mussolini to the effect that the Fascist militia will form an integral part of the army in war. Detailed plans for the mobilization of the militia and its incorporation into the army have not yet been made public: as the militia contains a large number of army reserves, it is clear that the problem is not a simple one.

The 37-mm. trench guns with regiments have been abolished, and in their place approval has been given for the issue of two 65/17-mm. guns per regiment. These guns are the same as those issued to the pack artillery, and are manufactured in Italy. They are to be manned by infantry soldiers forming part of the regiment. The change has been welcomed by the infantry, but criticised to some extent among the artillery.

It has recently been decided that recruits will normally be called up in their 21st year, instead of in their 20th year. The change to the new system is to be effected gradually during the course of the next 5 years; during this transitional period, the annual intake of recruits will be reduced from approximately 200,000 to 100,000.

JAPAN.**Despatch of Troops to Shantung.**

On 19th April the Japanese Cabinet, in view of the uncertain situation in Shantung due to the civil war in China, decided to despatch, as soon as possible, the 6th Division from Kumamoto—and in addition a telegraph regiment and a railway regiment—for the purpose of protecting Japanese residents at Tsinanfu and along

the Tsinanfu-Tsingtao railway. This force was about 5,000 strong and landed at Tsingtao on 26th April. Furthermore, it was decided that three companies from the Japanese North China garrison should be despatched by rail immediately from Tientsin to Tsinanfu and remain there until the arrival of the troops from Japan. These companies actually left Tientsin on 20th April, and arrived at Tsinanfu on 22nd April, within three days of the Cabinet decision. Japanese Military Headquarters at Tientsin stated, that if reinforcements were required for Peking and Tientsin, that they were expected to come from South Manchuria, where the Japanese 14th Division is quartered.

Two Japanese cruisers were also despatched to Tsingtao and a naval party, 500 strong, landed there on or about 20th April.

The Japanese Minister of Foreign Affairs stated that the Government were merely repeating the action taken last year. Emphasis was laid on the fact that troops were being sent for the protection of Japanese lives and property. He said that the morale of the Chinese northern troops was bad and that the position of Japanese residents might be serious if Tsinanfu were to fall. There are about 30,000 Japanese residing in Shantung, 2,000 of which are in the capital of the Province, at Tsinanfu. Japanese interests in Shantung are considerable.

Opposition newspapers in Japan strongly criticised the Government's action, but the Prime Minister issued a statement defending his action as unavoidable and declaring that the troops would be withdrawn as soon as possible.

MOROCCO.

French Zone.

The situation remains quiet. Further submissions of tribes in the Agadir region are reported.

Spanish Zone.

General.

The situation remains quiet, and the gradual surrender of arms continues.

The French Ambassador in Madrid visited the Spanish Zone in company with the High Commissioner; both subsequently visited the French Zone. The Spanish Press made much play with this visit, as showing the continued Franco-Spanish co-operation.

Reorganization of the Spanish garrison.

Considerable reductions and reorganization have been carried out in the past few months.

Future organization.

The Spanish Zone is divided into four military districts (*Circumscriptions*): Melilla, Rif, Ceuta-Tetuan, Larache.

The normal forces to be maintained in the zone are:—

	PRESENT STRENGTH.	
	Officers.	Other ranks.
<i>Spanish Regular Forces.</i>		
Staff	334	52
Infantry—		
4 infantry regiments	} 1,142	38,082
18 rifle battalions (<i>Cazadores</i>)		
Foreign Legion (8 <i>Banderas</i>)		
Cavalry—		
1 regiment	} 75	1,400
1 Foreign Legion squadron		
Artillery—		
4 artillery commands (1 per district). Each command has separate staffs for mobile batteries and for position batteries.		
The establishment is	197	6,190
9—10·5-cm. howitzer batteries.		
4—7·5-cm. batteries.		
4—7-cm. mountain batteries.		
4 position batteries (for outlying posts).		
3 coast batteries.		
2—15·5-cm. howitzer batteries (cadre).		
Engineers—2 mixed battalions	126	3,909
Signals and M.T.—1 W/T and M.T. regiment	39	1,810
Air Force. One group of—		
2 wings of 4 squadrons	} 71	547
1 hydroplane wing		
Marines—1 company per district	11	450
Miscellaneous services and departments	294	5,393
<i>Native Regular Forces (Regulares).</i>		
Mixed Spanish and Native units.		
5 mixed groups of Infantry and Cavalry at Ceuta, Tetuan, Larache, Melilla, Alhucemas	450	13,152
<i>Khalifian Forces.</i>		
The Khalifian Guard.		
<i>Mehallas</i> at Melilla, Larache, Tetuan, Tafersit, Ghomara, Jebala.		
Each <i>Mchalla</i> consists normally of 4 or 5 infantry <i>Tabors</i> and 1 cavalry <i>Tabor</i> .		
Other partizan units, <i>Idalas</i> and <i>Harkas</i> (native levies), and <i>Mokhaznias</i> (native police) are to be disbanded.		
Approximately	360	10,000
Total	3,099	80,885

A Royal Decree of December, 1927, laid down 90,000 all ranks as the maximum establishment in the zone.

Tangier Zone.

After months of abortive negotiations, the French and Spanish Governments have signed an agreement modifying certain provisions of the Tangier Statute in favour of Spain.

The whole Tangier question is now being discussed in a conference at Paris by representatives of Great Britain, France, Spain and Italy. The United States has notified these powers that it makes full reservation of its position regarding any decisions of the conference, which may affect American rights in Tangier and Morocco.

NORWAY.

Army Re-organization.

In July, 1928, the re-organization of the army comes into force. The effect of this re-organization, which has been brought about by the desire for economy, is to reduce further the strength of the army.

The following are the main lines of the re-organization :—

✱(a) The staff of the Ministry of Defence will be reduced to six officials.

(b) The pay of certain officers has been somewhat reduced.

(c) During the period of transition, schools for non-commissioned officers will be reduced in number.

(d) The reduction in the number of officers and non-commissioned officers :—

Generals by 50 per cent.

Lieutenant-Colonels by 21 per cent.

Majors by 26 per cent.

Captains by 43 per cent.

Subalterns by 63 per cent.

Colour-serjeants by 50 per cent.

Serjeants by 79 per cent.

(e) It has been decided to reduce the cavalry from 16 squadrons to 12 squadrons, a further reduction being contemplated.

(f) Recruit training has been fixed at periods varying from 30 days for the Train Corps, 72 days for infantry, to 90 days for cavalry and field artillery.

(g) The posts of Commanding General and C. G. S. have been combined.

(h) Military bands, of which there was one in each division, have been abolished.

Ski-running.

The following report from the 1927 Year Book of the Norwegian Ski-running Association shows to what a high degree of efficiency the Norwegian troops can attain :—

Last winter the troops stationed at Kirkenes marched on skis from Kirkenes along the Tena river as far as Alts, returning to Nyborgmeom at the end of the Varangerfjord.

The distance covered was 715 kilometres, and the company probably made a record in completing the journey in 23 days.

Depots were arranged at four places on the route, and provisions were transported from one depot to another, either on sledges drawn by reindeer or on "ski sledges" drawn by the men themselves.

In addition to a rifle, each man carried a bayonet, belt with cartridge case, and a knapsack weighing about 16 kilos. Officers and non-commissioned officers had pistol, field-glasses, map-case and a knapsack weighing about 12 kilos.

Clothing was as follows : The usual field uniform with military boots (not special ski-ing-boots), a fur cap with ear flaps, thick woollen socks and "toe caps." The skis were of the usual military type. Underclothes : half wool shirt and pants, foot rags (as is known, the Norwegian soldiers wrap their feet in a long rag instead of using socks. The socks mentioned above are worn outside these.) Each man had also woollen mittens and leather gloves.

The knapsack was the Bergan model, and each man carried part of a tent, and either a cooking vessel, a snow spade, or an axe.

The knapsack also contained a change of underclothing, a sweater, a sheep-skin jacket, a coat made of wind-proof canvas, and a hood of the same material. There were also sheep-skin breeches and breeches of canvas, and a cap to wear when in camp. An inner pocket contained a plate, &c., and provisions for the day, viz., two boxes of reserve rations and one of biscuits. There were also reserve parts of ski bindings, ski "wax," water bottle or thermos flask, toilet articles, towel, shoe brush, &c.

There was one ski sledge for every 12 men to carry the officers' luggage and first-aid materials, &c., provisions for 1 day about 12 kilos, camping equipment about 8 kilos.

As regards the reindeer which were to accompany the expedition, it was necessary to carry "moss" for the animals and food for the drivers.

Spare clothes, skis, &c., were placed at the depots.

Each ski sledge was drawn by two men, who could travel with a fully loaded sledge in difficult country at the rate of 4·5 to 5 kilometres an hour. There was a change of "sledge drawers" once daily.

It is interesting to note that the men who took part in the march did so after only 5 weeks military training.

Without giving details of the journey, it may be worthy of mention that a considerable part of it was made on wet snow, which made running very heavy. There was also a heavy snowstorm, which compelled the men to remain at one of the depots during one day.

PALESTINE.

Transjordan.

On 20th February an agreement was signed between Great Britain and Transjordan. This instrument included the recognition of the independence of Transjordan, but at the same time it contained provisions to ensure that Great Britain could continue to fulfil her international obligations as a Mandatory Power under the League of Nations. In particular the treaty legislated for the guidance of Transjordan, by the British Resident and other civil and military officers appointed to represent His Britannic Majesty, in such important matters as foreign policy, finance, judicial safeguards for foreigners, and in the organization, administration and employment of her armed forces.

PERSIA.

Pahlevi Port.

In conformity with the provisions of the recent Russo-Persian agreement, the Russian Mission for the handing over of Pahlevi Port arrived in Tehran from Moscow on 10th December. The three Persian representatives were nominated on 27th November.

The Persian Army in 1927.*(a) General.*

During the past year little headway appears to have been made in the regeneration of the Persian army, promised by Reza Shah's accession to power. Corruption, in all its forms, still persists, training has remained at a very unambitious level, while the enthusiasm that inspired the troops at the time of the coronation of Reza Khan has evaporated. The majority of the higher commanders are men of little ability or character, and, consequently, the military operations of the year (except where tribal levies have contributed some successful fighting) have proved a record of incompetency and minor disasters.

(b) Finances.

The monetary allotment to the army in 1927-28 was, as in former years, 9,400,000 tomans. On the whole, expenditure has been placed under stricter control and the soldiers now receive their pay more regularly than was formerly the case. The War Office has, however, been unable to eradicate various malpractices which continue to cause an embarrassing drain on the funds at its disposal.

(c) Strength.

The estimated strength at the end of 1927 was 38,874, of which not more than 6 per cent. were conscripts.

(d) Composition.

The law of compulsory service was first enforced in the winter of 1926, when it was applied to the provinces of Tehran, Kasvin and Hamadan. This year it was intended to apply the law to all the provinces of Persia, but, owing to strong popular opposition and the agitation engineered by the mullahs, the Government were compelled first to give numerous exemptions, and finally to suspend conscription altogether.

(e) Organization.

In April, 1927, the divisional organization of the Persian Army was abandoned, and the troops in the provinces were organized into small "composite forces" of all arms as these were considered to be more suitable than a divisional organization for the rôle to be carried out by the Persian Army. Where two or more "composite forces" are combined under a single command, as in Lurestan and Kurdistan they are termed a "composite brigade."

At the moment the Persian Army is admitted to be incapable of mobilization ; for purposes of offence or defence against an external power, its value is, therefore, negligible. On the other hand, the present organization provides in each military area a self-contained force with a unified command and administration suitable for internal security duties.

The troops in the Central (Tehran) Division still comprise 1 cavalry, 1 artillery and 2 infantry brigades, but, since September 1927, the Divisional Headquarters has been abandoned, and each brigade has been administered and trained by Army Headquarters direct.

POLAND.

Corps of Frontier Guards. ("Korpus Ochrony Pogranicza.")

4. (a) *Increase of 5 battalions.*

In 1924 it was found necessary to organize a special armed force, called the Corps of Frontier Guards (K. O. P.), to maintain order and repel raids from beyond the frontier.

(b) *Relay race in the K. O. P.*

On the occasion of the third anniversary of their formation which fell in October, 1927, the Corps of Frontier Guards organized a relay race of an interesting nature. The race consisted in passing a baton from one end of the frontier guarded by the Corps to the other.

The race started simultaneously in the north and in the south.

Apart from its sporting side, the chief object of the race was to test the communications between guard houses and posts. The arrangements in each section for getting the batons through were made by the junior officers in the section, upon whose initiative and quickness of thought success depended. The distance to be covered by each individual soldier was 800 metres over good ground, and 500-600 metres, if the ground was boggy or very rough.

This picturesque event was won by the teams bringing the baton from north to south, who took 7 days and 1 hour, the average distance covered in each 24 hours by the winning baton being 173 miles.

PORTUGAL.**Communist Activity.**

According to press reports, Communist propaganda has been active in Portugal lately, and many arrests have been made.

Abortive League of Nations loan negotiations.

In response to an invitation from the Portuguese Government, a League of Nations Commission of Inquiry visited Portugal, to investigate the Portuguese application to raise a loan under the auspices of the League. A loan of £12,000,000 was hoped for. Owing to the refusal of the Portuguese Government to accept financial control by the League, the negotiations broke down at the March Council Meeting.

ROUMANIA.**The Roumanian Army.**

No important changes in the strength or organization of the Roumanian army have taken place during the past year, and its composition remains at 7 corps each of 3 divisions, a mountain chasseur corps of 2 divisions, and 3 cavalry divisions, formations being organized on the French model.

The death of King Ferdinand was a serious loss to the army as, besides being its titular chief, he took a keen interest in military matters and exercised a definite interest in questions of general policy and in the selection of officers for the higher commands. His opinions and selections were usually justified in the event.

RUMANIA.**Chemical Warfare.**

This scheme for the organization of chemical warfare in Rumania provides for an experimental section, a factory for gas masks and a gas school, but so far little has materialized. On the defensive side it is improbable that the army possesses more than 1,000 efficient respirators.

In the Budget for 1928 the following items appear:—

4,000,000 lei for School of Chemical Warfare.

6,500,000 lei for Laboratory Courses and Experimental Work on Chemical Warfare.

4,000,000 lei for Provision of Respirators.

It seems, therefore, as if something practical may be done during 1928.

SPAIN.

Spain and the League.

The Spanish Government has accepted the invitation from the League of Nations to resume active co-operation with the League.

SOVIET RUSSIA.

Turkistan-Siberian Railway.

1. The following account of this new railway, based on an article in "Izvestia" at the end of last year, gives some idea of the economic, as opposed to the strategic reasons for its construction, from the Russian point of view.

According to the Bolshevik account, the construction of the Turkistan-Siberian Railway has been undertaken mainly to guarantee the supply of cheap grain to Central Asia and the neighbouring districts (Siberia, Kazakstan and Kirghistan) and to facilitate thereby the cultivation of cotton in Central Asia.

The railway is also intended to open up the economic possibilities inherent in the wealthy districts through which it will pass, and thereby to extend the area from which the Soviet Government will be able to draw raw material.

The growth of requirements, especially of grain, in Central Asia is due to the increased consumption per head (said to be the result of the higher standard of living brought about by post revolutionary conditions among the peasant population) and to the artificial production of cotton in Central Asia in place of grain. Owing to the existing alignment of the railway from Siberia to Central Asia (Omsk-Tcheliabinsk—Samara—Tashkent) the transportation costs of the grain requirements of Central Asia are excessive. It is to lower this cost, and to enable the cotton growing areas in Central Asia to be exploited to the full, that the new railway has been undertaken.

The production of cotton in this area also suffers, under existing transportation conditions, from an additional economic disadvantage, namely, the variation in price between cotton and grain (1 r. 70 kop. for cotton as compared with 3 r. 18 kop. for grain, per 16 kilogrammes).

The Soviet Government has definitely decided to complete the construction of the railway by the financial year 1930-31. All plans connected with its construction and finance have been calculated for this period. 150 kms. of rails on the northern section were already laid in 1926-27. During the year 1927-28, it was "planned" that 343 kms. in addition should be completed.

It is anticipated that the completion of the line within the allotted time limit will be facilitated by avoiding the direct route across the more difficult sections, *e.g.*, Kurdai Range, and selecting a longer but easier trace.

2. *Economic survey of the areas traversed by the new railway.*

(a) *Area "tapped."*—The railway will run from Aris (Tashkent railway) to Novosibirsk (Omsk railway) and will be approximately 2,550 kms. in length. (Aris to Lugovaya 424 kms., Lugovaya to Semipalatinsk 1,475 kms. and Semipalatinsk to Novosibirsk 653 kms.) The railway will run through, or very close to, the following districts:—Kazakstan A. S. S. R. (Tchimkent and Auliatinsk districts of the Sir-Darya Government, and the Semipalatinsk Government); Kirghiz A. S. S. R. (Frunze, Tchu, Talak, Karakol and Narin cantons) and the Western part of the Siberian Republic.

The total area which will be affected by the new line is estimated at 120 million hectares. Of this area agricultural land amounts to 48 per cent. of which, in 1927, only 4 million hectares were under cultivation, the most important district being Western Siberia.

(b) *Population.*—The population of the area in 1926 was approximately 5 million, distributed as follows:—

Western Siberia	..	..45 per cent.
Kazakstan	..	..43½ "
North Kirghistan	..	..11½ "

Western Siberia being the most densely and Kazakstan the most sparsely populated district.

(c) *Cattle.*—The head of cattle in the area was estimated to be 26 million in 1927, distributed as follows:—

Kazakstan	..	..	..65½ per cent.
Siberia	..	..	..21½ "
Kirghistan	..	..	..13 "

(d) *Minerals*.—The area contains some of the largest deposits of the common metals within the Soviet Union (in the Altai range, the Alexander range and near the Western Chinese frontier); large coal mines, estimated to have a capacity of 10 milliard tons of coal, are also situated near the railway and these are of particular importance in that they are situated in the vicinity of the metal ore districts.

3. *Economic development rendered possible by the construction of the railway.*

It will be seen from the foregoing that the area under consideration may be divided economically into three districts: Central Asia, primarily a cotton growing area, Western Siberia, primarily grain growing and Kazakstan and Kirghistan a mixed agricultural area suitable for grain and in places for cotton.

It may be said briefly that the economic plan is to force the cultivation of cotton in Central Asia at the expense of grain and to provide for the food requirements of the population by increasing the cultivation of grain in North Kirghistan and Western Siberia; the construction of the railway will enable this grain to be sold at an economic price in Central Asia. At present in the irrigated area of Central Asia, 20 per cent. of the area is under cotton cultivation; by 1930-31 it is intended to increase the total area under cultivation by 570,000 hectares, of which 30 per cent. will be given up to cotton cultivation.

Similarly, in Kazakstan the area under cotton cultivation is to be increased from $13\frac{1}{2}$ per cent. to $19\frac{1}{2}$ per cent. of the total by 1931.

Rice is the staple diet of a proportion of the population; its cultivation requires three times as much water as that of cotton, and is, therefore, antagonistic to the latter in an irrigated area. It is intended to develop the valleys of the rivers Ili and Tchu into rice growing areas to meet this demand, and thus to avoid competition in the cotton area.

4. *Comment.*

The foregoing project may be said to be typical of the "planning" operations of the Soviet authorities in the agricultural-economic field, and it will be seen that little regard is paid to the eccentricities of human nature. Whether such a wholesale State enterprise will materialize, or whether it will be crushed at birth by the incubus of the official machine remains to be seen.

SOVIET UNION.

Tenth anniversary of the Red Army.

Celebrations throughout the U. S. S. R. took place on 23rd February to commemorate the 10th anniversary of the Red Army.

The following circular is typical of the instructions which were issued to ensure that this memorable occasion was suitably observed :—

The fundamental problems in regard to the celebration of the 10th anniversary of the Red Army should be :

- (1) Review the war preparedness and defensive capacity of the Soviet Union.
- (2) Strengthening the relations between the toiling masses and the R. K. K. A., and popularisation of prevailing problems of war constructive work.
- (3) The expansion of work in the Osoviakhim, the further enlistment of the wide masses of workers, peasants and peasantry in all military work carried out among the population.
- (4) Popularisation of the history of the civil war, fighting history and heroes of the Red Army.
- (5) Explanation of the *role* played by the Communist Party as organisers and leaders of the Red Army.

The celebrations of the 10th anniversary of the Red Army must be kept in the character of a holiday by the wide masses of workers and peasants, and marked as such by them.

- (1) Organization of public meetings of toilers with speeches regarding the defence of the country and preparedness of the Red Army.
- (2) Organization of evening meetings of defence and Red Army in clubs and reading rooms.
- (3) Carrying out of mass demonstrations of fighting preparedness by the toiling masses (demonstrations of organizations, Osoviakhim, physic-culturists, komsomol, women's organizations and army sections, etc.).
- (4) Organizations of new rifle ranges, circles for military knowledge, musketry circles, circles for physic-culturists, military circles, etc.).

- (5) Organization as far as possible on the day of celebration, with the help of workers and peasants and Red Army men, of mass sports meetings, musketry competitions, review and competition of military work among the population, etc.
- (6) Excursions of the toilers to barracks and clubs of military sections, and to inspect local celebrations.
- (7) A wide campaign in the central and local press.
- (8) To circulate among the population masses of military literature.

For the carrying out of the celebration of the 10th anniversary of the Red Army it is absolutely necessary to attract party members, komsomoltzi, soviets, professionals, and public organizations, and in the same way representatives of peasants and workers. For the preparatory work in the governments, districts and villages commissions must be organized to comprise representatives of the highest district organizations and military sections.

(Signed) Secretary Zk. S. KOSIOR.

Note.—The 10th anniversary of the Red Army will be celebrated on the 23rd February, 1928, and great preparations are being made throughout the Soviet Union.

Strength of the Osoaviachim.

At the recent meeting of the Central Soviet of the Osoaviachim it was reported that about 1·8 per cent. of the total population of the U. S. S. R. belonged to the society. It was also pointed out at this meeting that the journal of the society, "Aviation and Chemistry", is too serious and technical for the average reader, and it was recommended that this publication should be produced in a more popular form.

SUDAN.

JANUARY 1928.

The Nuer Disturbances.

In December, growing disaffection amongst certain sections of the Nuer tribes on the Upper Nile culminated, first, in open defiance of Government authority and, subsequently, in the murder of Captain

Fortress and a District Commissioner in the Bahr-el-Gazel province. Punitive measures were undertaken by units of the Sudan Defence Force and a flight of aeroplanes and though the swampy and wooded nature of the country has inevitably prolonged the operations, the situation is being rapidly restored.

FEBRUARY 1928.

The Kuer Disturbances.

The situation having been restored by the combined action of Sudanese troops and aircraft, the majority of the latter have now been withdrawn to their peace stations. Political officers are engaged in touring the disaffected areas with an escort of Sudanese mounted rifles and police.

SWITZERLAND.

Fortress Garrison Troops.

These troops, which garrison the defended areas of St. Gothard and St. Maurice, are now to be under the chief of the artillery arm for command and administration.

SYRIA.

General.

The situation remains generally quiet. The Syrian elections were held without disorder.

In view of possible trouble with the Wahabis, the French propose gradually to strengthen the southern portion of the Damascus Command. They propose to establish two posts on the Rutba—Damascus motor track; a road is being built from Soueida, in the Djebel Druze, north-east to the Safa, where a new post is to be established.

French Order of Battle.

See Monthly Intelligence Summary, Vol. XI, No. 6, October 1927, page 233.

Two further "regular" battalions have been withdrawn from Syria; a new Syrian battalion and a camel company have been formed; in addition 2 further companies of *Chasseurs Libanais* are in process of formation.

The French garrison now consists of 12 "regular" and 8 Syrian battalions, with ancillary units.

The Northern Frontiers Boundary Commission.

The Franco-Turkish deadlock continues.

The question is now being discussed at Angora by the French Ambassador, and it is probable that the final negotiations will take place at Geneva. It appears that one of the chief reasons for the Turkish attitude is that they fear that the "Bey el Cihel" (the north-eastern corner of Syria) may become a Kurdish enclave. In this they seem to be justified, for the French authorities in Syria have promised land in the "Bey" to Hadjo Agha, a prominent Kurdish chieftain who has on a previous occasion raised the standard of revolt in Turkey, and is said to be only too willing to cause trouble to the Turkish Government in the future, should a suitable occasion arise.

TURKEY.**Amendment to the Constitution.**

On the 9th April the Grand National Assembly of Turkey unanimously passed a Bill originated by the Prime Minister, Ismet Pasha, to separate religion from the State. The Bill provides that Islam shall no longer be the State religion of Turkey, that deputies and State officials shall in future take the oath of office on their honour and not by the ancient formula of "By Allah," and that the Grand National Assembly of Turkey shall no longer be charged with the application of the Mohammedan law. This last has been a dead letter since October, 1927, when the new civil code replaced the Moslem judicial system.

The secularization of the Turkish State is the logical sequence of the abolition of the Caliphate in 1924, the suppression of religious orders, and the prohibition of the wearing of Moslem head-dress. The decision of the assembly has excited no comment in the country but this is perhaps no indication of the feelings of the people, in view of their natural pacificity and the repressive nature of the present republican *regime* in Turkey. In the army there is still a proportion of devout Moslems, particularly amongst the senior officers, of whom Fevzi Pasha, the Chief of the General Staff, is one. It is not known how they will view the abrogation of one of the fundamental provisions of the Turkish Constitution; "The religion of the Turkish State is Islam."

War Department Appropriation for 1928-29.

Details with regard to the Appropriations Bill for the ensuing fiscal year were published in the Monthly Intelligence Summary for February, 1928. The Bill received the signature of the President on 23rd March, but during its passage through Congress alterations were made which necessitate modifications in the figures previously given.

The amounts finally appropriated, as compared with corresponding amounts for the year 1927-28, are as follows :—

— — — —	1928-29.	1927-28.	Increase or decrease
	dollars.	dollars.	dollars.
For military activities	309,601,568	295,420,178	+14,181,390
For non-military activities ..	88,915,653	92,137,829	—3,222,176
Total	398,517,221	387,558,007	+10,959,214

The above figures include in each case appropriations on account of amounts over-expended in certain directions during the previous year.

In addition 1,844,419 dollars was re-appropriated for military activities from certain balances unexpended during 1927-28.

Provision has now been made for a slight increase in the strength of the National Guard, which it is estimated will reach 180,000 by the end of the forthcoming financial year. Allowance has been made for active duty training not exceeding fifteen days, for officers of the Organized Reserves. The appropriation for the Reserve Officers Training Corps shows an increase of more than 300,000 dollars over the amounts allotted in the previous year. The amount granted for Citizens' Military Training Camps is the same as in the Bill for 1927-28; this is calculated to cover training expenses for 35,000 trainees.

The fact that additional expenditure has been sanctioned for the National Guard, Organized Reserves, and the Reserve Officers Training Corps is indicative of the importance attached by the American military authorities to those non-regular organizations, which represent the primary means of expanding the American Army in the event of war.

The general impression derived from the study of the Appropriations Bill for 1928-29 is that the present administration, in spite of its devotion to ideals of economy, has not starved the army, nor has Congress shown itself to be parsimonious. The increase in the appropriations for military activities is relatively small, and does not carry any particular significance, except perhaps as a further proof if one were needed, that the United States, while ready to renounce war as an instrument of policy, is not yet prepared to rely upon treaties alone as a guarantee of peace in the future.

Recruiting and Man Power.

1. Terms of service.

Every male Turkish subject is liable to military service between the ages of 20 and 46.

The first year is taken up with the formalities of registration, medical examination and classification. During the second year recruits are sent to corps or departments in two batches, on 1st May and 1st November, and serve periods ranging from 1½ to 3 years according to the arm of the service.

The remainder of the time a man is liable to military service is spent in the Reserve. Under exceptional circumstances the duration of military service can be prolonged.

The periods of training range from 6 months to one year (the latter period for the Navy).

There are certain exceptions for younger sons whose brothers have died on service and for men who have to complete a course of study at one of the approved schools or who are not sufficiently fit at the time of examination for service.

By payment of an exoneration tax of £ T600 a man may attend a course of instruction instead of performing military service.

2. Recruiting organization.

The recruiting organization is on a territorial basis, with certain exceptions owing to the difficulties of recruiting those districts inhabited by the Lazes, Kurds and the mountainous district of Armenia. Turkey is divided into nine territorial areas corresponding generally to corps.

The territorial areas are divided into military districts which are sub-divided into recruiting bureaux, each of which has a commandant with a small staff. In December, the bureaux send out to each village and caza lists showing men to be called up. This is known as "the first call." All persons of 20 years of age are obliged to report, either personally or in writing, to the recruiting bureaux, giving various particulars. The individuals are then warned when to expect "the last call" and what to do when they receive it. This call is issued about 1st July each year, and those who are summoned by the first call are instructed to report to the Council of Revision. This Council consists of—

- (i) The Senior Civil Functionary of the locality.
- (ii) The Commandant of the Recruiting Bureau.
- (iii) The Census Officer.
- (iv) A member of the administrative or municipal council of the locality.
- (v) Two doctors.

The documents of each recruit are checked and he is medically examined. If there are more recruits than are required, lots are drawn. Those drawing lots are handed over to a Commission consisting of—

- (i) The Commandant of the Recruiting Bureau.
- (ii) The doctors of the Council.
- (iii) A naval officer (only where men are required for the Navy).
- (iv) A Gendarmerie officer.

The Commission allots the men to the various arms as required.

These operations result in each class being divided into four categories, *i.e.*, fit for service under arms; fit for service in a non-combatant branch; re-examinable; and not fit for service.

The first two categories are then warned on what date they will be required to join up.

3. Recruiting statistics and reserves available.

It is estimated that each year about 80,000 men are fit for service, but that only about 50,000 are actually taken. Although the President of the Republic has recently stated that Turkey could count on producing an army of a million men, it is unlikely that she could equip and arm more than 300,000 at the outside.

4. *Officers of the Reserve.*

The Turkish Government passed a new Law, No. 1076, on 16th June, 1927, laying down the Regulation for the Reserve of Officers. The chief features of the Law are as follows :—

(a) *Recruitment.*—Officers of the Reserve are obtained from four sources :—

- (i) Officers who have retired from the Army, Gendarmerie and Marine.
- (ii) Those who, before the publication of the Law, were known as Reserve officers.
- (iii) Warrant officers who, on retirement, are drafted to the Reserve with the rank of lieutenant.
- (iv) Individuals who, when they are called up for service under the Law of Military Service, elect for service as Reserve officers.

These last-named must have a diploma at one or other of the Lycees obtained after 5 or 7 years, or at one of the professional schools, or the College for the Merchant Service. They first serve for 6 months in the ranks as candidate officers, then receive 6 months' instruction at the Harbie Mektubi (in the case of officers of the Line), or, if they are doctors or other professionals, 6 months at special schools, and, finally, according as they have obtained at their Lycee, no military certificate, a 2nd or a 1st class certificate of military aptitude, they do 6, 4 and 2 months respectively with a unit. If they have passed the necessary tests they receive commissions as 2nd lieutenants; those who have distinguished certificates at their Lycees pass direct to 2nd lieutenant from the school; those who fail at the tests complete 1½ years in the ranks with the rank of serjeant. During the whole of their training period, as regards clothing, rations and pay, they are treated similarly to the regular officer candidates of the Harbie Mektubi.

(b) *Registration and calling to the colours.*—Officers of the Reserve are required to keep their local recruiting officer, or, if abroad, their ambassador, minister, or the nearest consul informed of their address, and they are called up once a year, at the time of the annual levee of conscripts to report either personally or in writing. They are liable to be called to the colours either for service or for manœuvres

so long as they are of military age. They are thus called for training usually every 2 years for a maximum period of 1½ months. Certain exemptions are made in the case of indispensable officials, such as Members of Parliament and National Commissions, civil officials, such as Valis and Secretaries of Government, and a proportion of school teachers.

(c) *Promotion.*—In peace time officers of the Reserve are promoted equally with officers of the Army, the time passed as civilians counting as military service under the condition that a 2nd lieutenant does one period, a lieutenant two periods and a captain eight periods of instruction, and that they are well reported upon. To obtain field rank they must belong to a combatant arm and they must have fulfilled all the conditions laid down in the Law for Promotion of Regular Officers. In war they serve under the same conditions as regular officers.

YUGO-SLAVIA.

The Budget for 1928-29.

On 7th March the Skupstina passed Defence Estimates for 2,428½ million dinars (£ 9,000,000 approximately). This represents an increase of 79 million dinars over the estimates for the previous year.

In introducing his estimates before the Financial Committee of the Chamber, General Hadjié, the Minister for War, pointed out that the estimates did not indicate a marked increase above the actual expenditure of 1927-28, taking into account the large supplementary estimates (51 million dinars) which had been rendered necessary in that year.

The official figures are liable to a certain degree of subsequent manipulation, and they do not therefore furnish a precise guide to the policy to be adopted or the expenditure likely to be incurred. From an analysis of the estimates, however, it does not appear that any striking changes or abnormal increases are contemplated in the near future.

The numbers for which estimate has been made in the Budgets for 1927-28 and 1928-29 are as follows:—

	1927-28.	1928-29.	Difference.
<i>Army.</i>			
Officers	6,641	6,795	+ 154
Other ranks	100,900	101,810	+ 910
Cadets, &c.	5,250	5,321	+ 71
<i>Navy.</i>			
Officers	302	341	+ 39
Seamen	3,715	4,482	+ 767
<i>Gendarmerie.</i>			
Officers	91	102	+ 12
Other ranks	5,035	5,225	+ 190
Total increase ..	..	..	+ 2,143

Increased allotments are included for the Navy (+10 millions) and Air Force (+3 millions). General Hadjié insisted that these relatively small increases were not in any degree proportionate to the real needs of those two services, and he foreshadowed the inclusion of much larger sums in future budgets.

The officer strength in the Army is rising somewhat rapidly; this fact was adversely commented upon by some members of the Financial Committee, but the Minister was able to prove that numbers were still far short of establishment. He stated that the private soldier costs 7 dinars a day (approximately 6d.,) which statement explains to a large extent the divergence between Yugo-Slav estimates and our own.

The Army in 1927-28.

1. *Higher Command.*

Throughout the series of changes which have taken place in the constitution of the Government General Hadjié has remained in charge of the portfolio for war, which he assumed in December, 1926. General Pesié, the Chief of the General Staff, has held that appointment for more than four years.

2. *Politics and the Army.*

The continued political dissensions, which have been such a marked feature of the internal situation, have had little effect upon the army. During the recent Cabinet crisis in February, that very irresponsible politician, M. Radié, startled the country with a proposal for the formation of a Coalition Government under the leadership of a non-party man, preferably a soldier. Although this attempt to drag the army into the forefront of the political stage evoked a violent outburst in the Skupstina, it does not appear to have had any real measure of support either in Court circles or in the army itself.

3. *Conclusion.*

The Yugo-Slav Army is undoubtedly the most formidable force which exists to-day on the Balkan Peninsula. It is also the surest guarantee of stability within the country itself.

On the other hand it cannot yet be regarded as a match for the armies of any of the first class powers. The chief reason for this is still the question of armament, although real efforts are undoubtedly being made to improve equipment and to organize local resources for the production of munitions. Shortage of trained officers and deficiency of rail communications are contributory reasons of much importance.

CORRESPONDENCE.

Proposed memorial to the late Lieut.-General Sir Ronald Charles Maxwell, K.C.B., K.C.M.G.

SIR,

At a recent meeting of friends and comrades of the late Lieut.-General Sir Ronald Maxwell it was decided to erect a memorial to mark the admiration and respect for his character which was felt by all who knew him, and to commemorate the eminent services which he rendered, particularly when Quartermaster-General to the Forces in France during the Great War. A representative General Committee and a small Executive Committee have been formed.

The General Committee have decided, with the permission of the Dean and Chapter, to place the Memorial in Rochester Cathedral, close to where so much of Maxwell's Home Service was spent and where he was married. It is hoped to raise sufficient funds for a stained-glass window and tablet.

It is thought that the scheme will appeal to many of those who were associated with Sir Ronald Maxwell during his career, and that these may welcome the opportunity of contributing to the Memorial.

Donations will be gladly received and acknowledged but no statement of individual contributions will be published.

Lloyd's Bank, Limited (Cox's and King's Branch), No. 6, Pall Mall, S. W. 1, have kindly consented to open an account called "Maxwell Memorial Fund," into which contributions should be paid direct.

Yours faithfully,

H. M. LAWSON, LIEUT.-GENERAL,
Chairman of Executive Committee.

Protection at Rest. Outposts.

DEAR SIR,

Throughout Section 31, Chapter IV I. T. Vol. 2, emphasis is laid on the fact that the principles underlying the occupation of an outpost position are the same as those laid down for a normal defensive position, *i.e.*, as far as forward infantry are concerned, dispositions in a series of defended localities in such depth as numbers and the nature of the ground permit.

The only reason advanced for the use of the words 'piquet,' 'supports' and 'reserves' is 'to enable an outpost position to be occupied rapidly and methodically.'

I submit that, apart from being of assistance, these terms lead to confusion. The word 'piquet' is not used in the chapter on defence; 'supports' is a word which has been deleted from both attack and defence.

It goes without saying that the simpler our training manuals, the better. The addition of the terms 'piquet' and 'supports' tends to complicity and the regarding of outposts as being some special form of military manoeuvre entirely divorced from defence.

Provided that the infantry company, platoon and section commander has the two factors of 'defence in depth' and 'mutual support by fire' imbued in his mind, I cannot see that the inclusion of what is acknowledged to be an alternative nomenclature for defended posts, defended localities and company reserves is of any value.

Yours faithfully,

S. W. JONES, CAPTAIN.

The Austrian Tyrol.

DEAR SIR,

It may be of interest to some of your readers, who are desirous of learning German, to know that special facilities for studying this language are offered at Kitzbuhel, where the British Vice-Consul (Mr. Forbes Dennis) and his wife, assisted by an expert resident German tutor, receive a limited number of pupils at the Tennerhof, their chalet above the town.

Kitzbuhel, one of the healthiest and most picturesque spots in the Austrian Tyrol, lies between Innsbruck and Salzburg, and the journey from London is easy. It is renowned for all winter sports, while in summer there is tennis, bathing and every variety of mountain excursion.

I may add that the instruction, food and accommodation are all excellent, and that both Mr. and Mrs. Forbes Dennis are delightful hosts.

The terms are six guineas weekly.

If any of your readers wish to spend a pleasant and profitable leave they can obtain further details from—

A. E. FORBES DENNIS, Esq.,
British Vice-Consul,
Tennerhof,
Kitzbuhel,
Tyrol, Austria.

I am, dear Sir,

Yours faithfully,

J. F. MEIKLEJOHN, MAJOR,
The Poona Horse.

REVIEWS.

THE PALESTINE CAMPAIGNS.

By

COLONEL A. P. WAVELL, C.M.G., M.C.

(Messrs. Constable & Co., Ltd., London, 1928), 12s. 6d.

It is difficult to put down this engaging work without reading it right through to the end. For the ordinary reader it provides a most lucid narrative of a series of operations which were so complete in themselves.

For the student there is generally a most accurate and clear account of campaigns, conducted under the conditions of moving warfare, which are worthy of close study. This short volume of some 250 pages gives the best account of these campaigns which has as yet appeared. For this reason, as well as for its fair criticism and clearness of expression, it will prove invaluable as a groundwork for more detailed study. The author is perhaps happiest in his description of the strategic considerations which influenced Lord Allenby's decisions. While he pays a just tribute to the genius of this great Commander, he emphasizes how much success had been prepared by the "foresight and strategical imagination" of his predecessor Sir Archibald Murray. To quote Lord Allenby's own words—"The organization he created, both in Sinai and Egypt, stood all tests and formed the cornerstone of my success."

The engagement, which the troops under Sir Archibald Murray fought, which gave the most far reaching results was Romani.

"Romani was a decided victory for British arms, and the fact that even more striking success might perhaps have been won must not be allowed to disparage the result." This result was in reality the security of Egypt and the Canal from further enemy attack. The engagement therefore merits a clearer description than that given by the Author. There is a reference, at the end of the narrative of this engagement, to the difficulties of water supply, "but the brilliant work of Smith's Mobile Column showed what might have been done." The reader may search in vain to ascertain what this Column actually did.

The Author deals kindly with the passive defence of the Canal in early February 1916. It is thought that as valuable a lesson could be drawn from the failure of the Cavalry on this occasion as from the brilliant successes of the mounted arm in Palestine. A few minor criticisms will not detract from the value of a book which every officer should possess. It is true that the rainy season, described on page 7, lasts from November to March; but the period when "large tracts of the plain land become a sea of mud and the roads are often unpassable," with the resultant effect on military operations, may be calculated, with greater accuracy, as lasting from approximately the second week in December to the last week in February.

The picture which the general description of the country leaves in the mind of the reader is not sufficiently clear. One of the most important roads "from Beersheba by Hebron up the spine of the Judaran Range to Jerusalem and thence on to Nablus" is more accurately described thus on page 69, than as "crossing the range from North to South" on page 7.

The maps generally are not in keeping with the high standard of the text; while the reference to Map V on page 29 is an obvious error.

The brief reference on page 180 to the time lost in overcoming the difficulties and forcing a crossing of the swollen Jordan, pays very scanty tribute to the skill of the Engineers and the perseverance of the troops.

The Author apparently fails to appreciate the significance of the infantry attacks made on the first days of May 1918 during the second raid on Amman (page 187). There was no question of the Infantry being able to force the Nimrin position. The attacks were made with increased persistency in order to attempt to alleviate the perilous position of the mounted brigades in Es Salt.

In his concluding Chapter Colonel Wavell brings out the true lesson of the Campaign as "not so much the value of the horseman, as the value and power of mobility, however achieved." He further lays emphasis on the great advantage of surprise, dependent as it is on mobility; and on training which gives the ability to manœuvre.

He contributes a very able dissertation on "whether a mechanized force could have carried out even more expeditiously and with less loss what the cavalry accomplished in Palestine."

This is perhaps the most valuable chapter in this attractive volume. It is worthy of very careful consideration. While the writer questions whether the exponent of the six-wheeler would agree that the Sinai desert would prove impracticable for this form of mechanical transport; he considers that, for his greater profit, every student of war should read this last chapter of Colonel Wavell's book in conjunction with the last chapter of "Where Cavalry Stands to-day" by Lt.-Col. H. V. S. Charrington, M. C., 12th Royal Lancers.

Careful consideration of the views of these two able soldiers may help him to preserve a balance in regard to one of the most difficult military problems of the day.

THE STAFF AND THE STAFF COLLEGE.

By

BREVET-MAJOR A. R. GODWIN-AUSTIN, O. B. E., M. C.

(*Messrs. Constable & Co., Ltd., London, 1927*) 21s.

The British public—and especially the British military public is very apt to be antagonistic to anything with which it is not acquainted, and Major Godwin-Austin, in writing the first book about the Staff College, has done a great service in dispelling some of the mysteries and myths connected with that institution.

He has evidently delved deep into the archives and unearthed many long hidden facts about the history of the Staff College, and in presenting them he has a happy knack of dressing them in a fluent style and surrounding them with interest and humour.

The story of the Staff College, and the strong path of development of Staff training, forms an interesting commentary on the advance of military thought in the British Army.

When in 1799, Gaspard Le Marchant obtained the support of the Duke of York to his scheme for founding a military educational establishment, it is strange to read that the man selected as the first instructor was a French émigré General Jarry who could not speak English but was popular at court. When this old warrior became too infirm to discharge his duties, the post was offered first to the Prussian Scharnhorst and then to the Frenchman Dumouriez.

The author guides us through the years of war when the Duke of Wellington took a deep interest in the College, and then through the ensuing years of peace when he tired of it and allowed it to drag on in a state of inefficient inertia.

Then came the Crimean War and the subsequent scandals which reflected ill on the staff work of the army, aroused the interests of the Prince Consort and the Duke of Cambridge in the military education of officers, and infused fresh energy into the life of the College. This, again, was followed by a period of peace, when the Duke of Cambridge, fighting or losing battles for the old traditions of the Army, took his stand against Lord Wolseley and his Staff College Officers—those “very ugly and very dirty officers.”

At this time it is curious to learn how technical was the training of the future Staff Officer. Many hours were spent in the study of Euclid and logarithms and much depended on an exact knowledge of how to tie a military knot correctly. The Army is much indebted to Lord Wolseley for introducing a more practical curriculum.

In July 1905, owing to the representations of Lord Kitchener, the first Staff course in India was held at Deolali and in June 1907, the present Staff College at Quetta was opened by General Smith-Dorrien, thus inaugurating an Imperial General Staff.

In the latter part of the book, the author gives an interesting account of life at the Staff College to-day which will be most useful to all who propose going there. He shows that work is not unmixed with play and that the course at Camberley entails two years in surroundings which are ideal for sport and games.

Major Godwin-Austin's book will do much to show that modern methods of training should make the Staff Officer of to-day, and the future, a practical, human, tactful man of the world, rather than a high-falutin' impractical theorist and this cannot fail to engender that confidence between the staff and the regimental officers and soldiers which will be of such paramount importance in the fast moving complicated wars with which we are threatened in the future.

ON FUTURE WARFARE.

By

COLONEL J. F. C. FULLER, C.B.E., D.S.O.

(Messrs. Sifton Praed & Co., London, 1928) 12s. 6d.

This is a collection of 17 lectures and articles written by Colonel Fuller from time to time in various magazines and journals.

Their main theme is mechanization and the replacement of our existing army by a highly mobile mechanized force.

The central problem of the book is "half an inch of steel to cancel out half an ounce of lead." As Colonel Fuller very rightly says, we ended the last war fully convinced that in face of the stopping power of the bullet, the unarmoured soldier is powerless to advance without very adequate artillery support which would render the power of the defence helpless, and, even then, one or two isolated machine-guns which escaped the artillery bombardment, were apt to hold up the attack of a whole division.

Our programme for 1919 was based mainly on tanks, aeroplanes and gas, and, so convinced were we of the possibilities of the tank that in the peace terms imposed on Germany the construction of tanks was forbidden.

In spite of these lessons, our post-war army is equipped with even more infantry stopping weapons, without adequate addition being made to its offensive power by the increase of artillery and armoured fighting vehicles. Colonel Fuller's fear is that, should another war engulf the world to-morrow, "it would be the Great War over again, with its trenches, and its wire and its mud." It would be difficult to argue that he is not right—we have been slow to act upon lessons of the Great War—but during the last two years definite steps have been taken to modernise our army.

With the limited amount of money at our disposal, and with the limited experience we have had of the capabilities and tactical employment of armoured fighting vehicles in war, it would obviously be folly to commit ourselves prematurely to any one type. It is difficult to see what other course the authorities could have taken than to form an experimental armoured force before definitely embarking on any wholesale policy of mechanization.

Few will fail to agree with Colonel Fuller, even before reading this interesting book, that the war of the future lies in the machine and that muscle power will be replaced by petrol power.

IMPERIAL MILITARY GEOGRAPHY—5TH EDITION.

By

CAPTAIN D. H. COLE, M.B.E., F.R.G.S., A.E.C.

(Messrs. Sifton Praed & Co., Ltd., London, 1928). 10s.

This latest edition of Captain Cole's invaluable book does not differ to any great extent from the previous editions. The Chapter on India has been slightly expanded, but otherwise there are no important alterations. It still remains the standard text book on this subject for officers studying for promotion or Staff College examinations and it is rendered particularly useful by its chapter on Imperial Organization and the Appendices on the Constitutions and Governments of the Empire, which would usually be considered to be outside the region of pure geography.

THE FUTURE OF THE BRITISH ARMY.

By

MAJOR B. C. DENING, M.C., R.E.

(Messrs. H. F. and G. Witherby, 326, High Holborn, London, W. C. 1) 10s. 6d. nett.

I

The conditions and the trend of events of the Great War took all belligerents by surprise. The possession by Germany of a superiority in machine-guns and in heavy artillery showed that she had assimilated some of the lessons of the Russo-Japanese War. On the other hand, her massed attacks proved clearly that she had failed to appreciate the annihilating effects of modern fire. The British Army, though imperfectly equipped, was perhaps the best trained force in the field. But no army looking back can pride itself on its prescience.

Great Britain, more than any other nation, seems to have taken this failure to heart and to be determined to be well in the van of progress should a malignant fate again cast her destinies into the cauldron of war. A notable band of writers, taking as their warp the latest experiences of the great war, is weaving a closely-reasoned, if imaginative, fabric of future war; the threads of whose weft are the numberless advances in science.

Major Denning is of this band and has made a valuable contribution to its literature. He is out for mechanization of the greater part of the British Army at home and abroad. He deals clearly with the obstacles to that aim, especially as regards its application to India, and indicates the means whereby they may be overcome. He examines the financial aspect of his proposals in some detail and claims that, though they increase the effective force of the army, they should nevertheless render possible a considerable reduction in army estimates.

The book is, however, by no means free from blemishes. It is marred, for instance, by the introduction of a Prize Essay, dated 1924, which was written before the advent of tankettes and six-wheelers; and this essay, though brought up to date to some extent by remark in other chapters, gives a rather obsolete impression to the whole study. There are, moreover, certain definite points on which many people will find agreement with the author difficult. In building up his Ideal Army Corps, he takes as his basis a tank brigade (or regiment) containing one tank battalion and no less than three battalions of infantry transported in armoured carriers. He considers that two of the latter are required for 'mopping up' and for protection. Actually, 'mopping up' is no more required in a tank action than in a naval action, for victorious tanks will no longer withdraw to re-fit. By the right of conquest they will dominate the surrounding country, and field-workshops will be pushed forward into the conquered ground to effect repairs. And as to 'protection,' it is best afforded, not by infantry outposts, which can be outflanked and overrun, but by the distant guard of the lighter vehicles. The third battalion is held to be required in order to provide a sufficient infantry force for the passage of obstacles such as rivers and canals. But, surely, surely it is better to trust for this purpose to feinting, night work and rapid movement than to reduce the possible mobile firepower of the tank army by 75 per cent. Some infantry are undoubtedly required, but, until experience proves the contrary, not more than one battalion to a mixed brigade containing tanks, tankettes, armoured cars and guns. They would be carried, not as suggested in the book, 5 men to a 'carrier,' but in a roomy armoured vehicle taking 10-15 men and suitable for the rapid evacuation of wounded. Exception may also be taken to the employment of guns and machine-guns for close support tasks; for close support fire will not be required in the tank battle except in the case apparently envisaged by the

author of a combat in which infantry is still a dominant factor. Nor does there seem to be a need for a machine-gun battalion per division or for a medium battery. All available machine-guns should be in A. F. Vs. and the medium battery will only find a rôle in siege warfare. As regards the suggestions made for A. A. defence, the forward despatch by Corps H.-Q. of guns for the protection of divisional areas, which may be moving at the rate of 100 miles a day, does not appear to be a sound method of guarding against air-craft. With such rapidly moving bodies, the area system of protection must be abandoned and A. A. guns furnished for each speed group.

So much for objections. It remains to say that the book is one of the first attempts to grapple with the whole problem of mechanization in concrete fashion and is to be welcomed on that account. It contains many useful suggestions on the necessary adaptation of the Cardwell system, the provision of reserves, utilization of civilian transport and reorganization of the Territorial Army, and it deserves to be widely read.

THE FUTURE OF THE BRITISH ARMY.

II.

This book, as its title indicates, deals with the great problems which have to be faced in connection with the future development of the British Army. It points out the imperative need of mechanization, explains the chief administrative and financial difficulties in the way, and suggests a possible solution.

The solution outlined is one within the bounds of practical politics, and the author fully takes into consideration such formidable obstacles as the Cardwell system and the bugbear of financial stringency. Dealing, as he does, with such controversial matters as future developments in strategy, the composition of the Regular and Territorial Army, and the amalgamation of the three defence departments, his deductions must necessarily lay themselves open to criticism. It may be suggested for example, that the author does not fully appreciate the requirements and difficulties of the Army in India, and on occasions his enthusiasm, though generally kept well within bounds, seems to run away with him when he contemplates the financial savings that would accrue from the scheme which he advocates.

Be this as it may, Major Denning's book deals concisely and logically with a subject which is of importance to all soldiers; it is written in clear military style, and it will well repay reading by all who are interested in the subject with which it deals, and anxious to keep in touch with modern developments.

THE JOURNAL OF THE SOCIETY OF ARMY HISTORICAL
RESEARCH.

VOL. VII, No. 27, January, 1928, 6s.

This Journal deserves to be better known. One is inclined at first to consider that it is only of interest to the antiquary or delver in dry records. But, it soon becomes apparent, on reading, that this is not so. In fact, the Journal is of absorbing interest as it enables one to visualize the spirit or "atmosphere" of a bygone day. Take, for example, "The adventures of Sergeant Benjamin Miller". Here is an extraordinarily graphic picture by an eye-witness of events over a century ago.

The writer describes the life of a gunner of the Napoleonic period, which, to say the least, was sufficiently haphazard and varied to suit the most intrepid soldier of fortune. One realizes the chance nature of voyages in those days, both from the point of view of capture by the French and of safety in sailing. The rough and ready medical arrangements, the hard life and lack of comforts, the crude recreations, all depict the tough fibre of which the Army of that day were made.

Historically, the diary is very accurate with an exceptionally good description of Sir John Moore's retreat to Corunna and the embarkation of the Army at that place.

The psychology of Miller is also interesting. With his puritan upbringing he is able to discomfit a priest in a discussion on the Scriptures and yet naively writes "I was nearly washed away in saving a cat when drunk" and again "but being so very drunk we could not find our ship"! He was no "grouser" and must have been stout-hearted; witness when, after Corunna, on arrival in England without money to buy food or drink and a 16 mile march before him, he remarks "We were well used to such fare and knew it would soon be over, so we thought nothing of it". His almost callous references to death and disease, his evident pride of country and his observant nature are noteworthy. Yet he has humour for he writes "few women (at Mar-morice) are ever to be seen and even then so muffled up as to leave nothing perceptible but their eyes, which are so ugly as to suppress any desire to see the rest of their persons". We may assume that Miller was a typical product of his time and begin to realize why the map of the world is so covered with red.

This article is however by no means the only interest in the Journal "The Colours of the British marching regiments in 1751" must be of interest to all infantrymen, and "The Highland Military pistol" to Scotchmen—and Hythe.

Questions are solicited by the Editor and the Journal should thus form a valuable medium for eliciting any information required by regiments about their past history.

A commendable novelty is a list of the articles which will appear in the next issue of the Journal.

The Society is anxious to enlarge its membership, but apparently individual membership only is legislated for. It may be suggested that a fixed regimental or mess subscription would achieve the Society's object, while at the same time providing a Journal of considerable military interest.

BIG GAME SHOOTING IN THE INDIAN EMPIRE.

By

LIEUT.-COLONEL C. H. STOCKLEY.

(*The Oxford University Press, Bombay*, 1928) Rs. 12-6-0.

This is a most excellent addition to the literature on the most fascinating subject of big game shooting.

It is not only extremely interesting reading but very useful as a book of reference—particularly to the novice who is keen to take up this form of sport.

The book gives advice on the selection of a shooting ground, the choice of a rifle, and much useful advice on the stalk, tracking, beating, sitting up and how and where to shoot the animal when the sportsman has got within shooting distance.

The reader of this book will realize that big game shooting is not a sport to enter into lightheartedly but one which requires great study and application.

The fascination of the sport will however amply repay the sportsman for the trouble he takes over it.

REPUTATIONS.

By

CAPTAIN B. H. LIDDELL-HART.

(John Murray, London, 1928) 12s. 6d.

If Captain Liddell-Hart has not got quite the same gift as Mr. Winston Churchill for drawing character sketches so that the reader almost seems to see the subject standing out in bold relief, he has produced a remarkable collection of potted biographies of some of the leading soldiers of the war and summed up their characteristics and their attributes in no uncertain fashion.

His book tends to belittle the reputations of the chief figures such as Joffre, Falkenhayn, Haig and Foch, and to enhance those of the slightly lesser lights such as Gallieni and Hunter Liggett. Gallieni comes best out of this critical examination, but, fine soldier as he undoubtedly was, he was never actually tested in the trying capacity of Commander-in-Chief in the field—he grasped the opportunity which he saw in his own particular locality, and so made possible the victory of the Marne. It is easy to say how much better he *would* have done than Joffre had he been in supreme command of the French armies—but this can only be a matter of opinion. Hunter Liggett only got command of the First American Army at the very end of the War and he can therefore hardly be classed with the remainder.

Marshal Joffre comes very badly out of Captain Liddell-Hart's critical examination. Not only is he blamed for the breakdown of the famous French plan XVII, but he is depicted throughout his period of chief command as a stubborn, brainless, and resourceless figure-head whose only value was his stolid calm under all eventualities. Captain Liddell-Hart sums him up thus "Joffre was not a general, but a national nerve sedative." Haig is most severely blamed for his "premature use of a handful of tanks which gave away the jealously guarded secret of this newly forged key to the trench deadlock."

His conduct of the campaign in France in 1916 and 1917 is described as "a painful indictment of the Commander-in-Chief's lack of vision and obstinate disregard of advice whose truth was borne out by the result." He is however credited with being a fine defensive general and a great English gentleman.

With regard to Foch he writes "It may be true that Napoleon forgot more than Foch ever knew. But Napoleon forgot, Foch learned."

The other "reputations" in this very interesting book are, Falkenhayn, Ludendorff, Petain, Allenby and Pershing.

It is rather a modern characteristic to belittle our public men and to compare disparagingly the leading soldiers of the Great War, with the Great Captains of the past. It is, however, very doubtful whether the stalwarts of the past would have come out any better under the same conditions; with their governments and the press in such close touch that every move came under a glare of criticism.

Throughout his book, Captain Liddell-Hart emphasises the value of surprise—he has no use for any commander who produced nothing startling and "Napoleonic." Surprise is certainly all important and the greatest of the principles of war, but there has probably never been a war where surprise was more difficult, on a grand scale, than in the Great War in France and Belgium, where the combatants were locked together from Switzerland to the sea and there were no flanks to turn.

Captain Liddell-Hart has certainly produced a most interesting book which will be widely read by civilians and soldiers alike but it is perhaps a little early yet to decide definitely the reputations of the leading soldiers of the Great War. In another 10 years—about the time when Earl Haig's book is expected to be published—we shall see them in a clearer and less personal light.

WHO'S WHO—1928.

(Messrs. A. C. Black, Ltd., London, 1928), £2-2-0.

The new "Who's Who" has just been published. This excellent biographical dictionary has now appeared regularly for the last 80 years, in the course of which it has become an indispensable book of reference for every library, reading room, and office. So accustomed are we, in fact, to being able to refer to it on any and every occasion, that we take its presence for granted, whereas its absence would call for immediate protest.

Consequently, in this review, it is only necessary to mention the fact that this year's "Who's Who" is out, and that it fully comes up to the high standard attained in previous years. It contains, in a very compact form, some 34,000 biographies, and is, in short, a volume to which all of us must refer some time, and some of us, all the time.

NEUVE CHAPELLE.

INDIA'S MEMORIAL IN FRANCE.

(Hodder & Stoughton, Ltd., London, 1927), Paper cover 2s. 6d.

Cloth edition, 4s.

It was a great inspiration that prompted the War Graves Memorial Commission to publish this Souvenir of the magnificent memorial to India's dead in France.

The memorial, which is situated appropriately enough in that place of awful memory, Port Arthur, at the junction of the La Bassee Road and the Rue Du Bois is described in detail in the narrative by Mr. Stanley Rice, late of the I. C. S.

A short account is also given of the brief but impressive ceremony of unveiling the Memorial inscription, which was performed at Neuve Chapelle by the Earl of Birkenhead on October 7th 1927, and which was attended by a Contingent from India representing the Indian units, which fought at the battle of Neuve Chapelle between 10th and 12th March 1915.

It will be a matter of gratification for those who served with the Indian Corps to read that the buglers who sounded the "Last Post" and "Reveille" at the ceremony, were drawn from those fine fighting units and old comrades of the Indian Troops, 1st Seaforths, 1st Highland Light Infantry, 2nd Black Watch and 2nd Leicesters.

Most of the addresses delivered at the Ceremony are reproduced for the first time "*in extenso*". The almost inspired words spoken by Lord Birkenhead on that occasion were published in some of the papers at the time but they well merit re-reading, while many will welcome the opportunity of reading the telling utterances both of Marshal Foch and Monsieur Perrier, the French Minister of the Colonies.

It is noticed that all the speeches, including that of the Maharaja of Kapurthala, were delivered either in English or in French and are so reproduced. It would perhaps have enhanced the value (though possibly also the cost) of this attractive souvenir to the Indian Soldier if these speeches had been translated into and reproduced in the Vernacular. The messages to the Indian Soldier and his relatives intended to be conveyed in the words of Lord Birkenhead and Marshal Foch should not be lost.

The prefatory message to the relatives of the fallen which bears the signature of His Majesty the King-Emperor might similarly have been translated.

The volume contains 25 photogravures of the Memorial in all its aspects and of the ceremony. For reasons of economy, these have been reduced in size consistent with clearness, yet they are adequate to give a very fair impression of the Memorial's magnificent proportions, and, at the same time, its elegant simplicity. It is a fine sample of the work of its designer, Sir Herbert Baker.

At the end are a series of photographs of the various War Memorials to Indian Troops erected in other parts of the Empire, *e.g.*, in Macedonia, Damascus, Port Tewfik, etc.

The position of the illustrations in relation to the text might have been better arranged. They are inserted in two batches between pages of reading matter in such a way as to split up its continuity, *e.g.*, Mr. Rudyard Kipling's speech at the luncheon after the ceremony is divided into two by eight pages of photographs.

The type of the book is clear and without trace of error. It is published at the extraordinarily low price of 2s. 6d. and merits a wide circulation. A cloth edition is also published at 4s. for those who wish for a more substantial volume.

The proceeds from the sale of the book are to be devoted to the furtherance of its distribution.

POLO PONY TRAINING WITH HINTS ON THE GAME.

By

COLONEL-COMMANDANT F. W. RAMSAY, C. B., C. M. G., D. S. O.

(*Messrs. Gale & Polden, Ltd., Aldershot, 1928*), 3s. 6d.

A most interesting little book and should prove of great value to beginners and to those who wish to train their own ponies.

The importance of the leg, as well as the hand, is emphasized.

This is a point that is often slurred over when discussing training of horses, and it is refreshing to read that hands are not everything.

THE CARE OF THE DOG IN INDIA.

BY I. ALSTON.

(The Oxford University Press, Bombay, 1927), Rs. 2-8-0.

This is a book on diseases of dogs in India written for laymen. It should prove valuable to amateur dog-owners who are not in direct touch with a veterinary officer.

The treatment suggested for various diseases appears to be sound and well-explained and the author has made his prescriptions as simple as possible.

Many owners of dogs will not share the author's preference for castor oil as a purgative. Liquid paraffin is nowhere mentioned in the book.

IBN SA'UD OF ARABIA.

By

AMEEN RIHANI.

(Constable and Co., Ltd., London, 1928), 21s.

This volume is a welcome addition to the limited number of useful books on Arabia, a country on which so much interest is now focussed, thanks mainly to the outstanding personality and ability of its ruler, Ibn Sa'oud.

The writer gives us a vivid picture in descriptive detail of the daily life, habits, and customs of King Ibn Sa'oud and his people.

He is an enthusiastic supporter of the policy of Ibn Sa'oud and shows clearly in his early chapters a strong disapproval of the manner in which the British Government has handled some of the Arabian problems.

The portions of the book describing the author's journeys through Arabia and his stay at Ar-Riyadh, Ibn Sa'oud's capital, are well written and full of interesting anecdotes and incidents.

A valuable chapter describes the Ikhwan and the tenets of Wahabism, the puritan movement which is now playing such an important part in the politics of the Middle East.

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Reviews.

RMB

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UNITED SERVICE INSTITUTION OF INDIA.

Rules of Membership.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Auxiliary Force, India, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members, the members of the Diplomatic Corps, foreign, naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—

Rupees 120 + entrance fee (Rs. *10) = Rs. 130.

Ordinary Members of the Institution shall be admitted on payment of an entrance fee of Rs. *10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Members receive the Journal of the Institution, post free anywhere.

Members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and Library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Sergeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 10.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution, on or after the 1st October, will not be charged subscription until the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

*Rs. 7 in the case of British Service Officers serving in India.

Contributions to the Journal.

All papers must be typewritten (in duplicate) and only on one side of the paper. All proper names, countries, towns, rivers, etc., must be in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., para. 204, and King's Regulations, para. 500.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

MILITARY WIDOWS' FUND,

BRITISH SERVICE

THIS FUND enables a British Service (Army) officer, by subscribing from Rs. 6 to Rs. 10 per quarter, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 8,775	to Rs. 12,375
For each child	„ 750	to „ 1,125

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Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer, but not in excess of 4 years.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return Home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Headquarters, Simla.

For admission and rules apply to :—

The Secretary,
MILITARY WIDOWS' FUND,
Army Headquarters, Simla.

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The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

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| 3. The Air Vice-Marshal, Commanding R. A. F. in India. | 10. The Military Secretary. |
| 4. The Secretary, Army Department. | 11. The Director, Medical Services. |
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| 6. H. G. Haig, Esq., C.I.E. | 13. The Director, Military Operations, General Staff, A. H. Q. |
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| 14. Major-General, W. M. St. G. Kirke, C.B., C.M.G., D.S.O. | 17. Brigadier E. F. J. Hill, D.S.O., M.C. |
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| | 20. Squadron Leader E. J. Hodsoll. |

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1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed inside front cover.

3. The Reading Room of the Institution is provided with all the leading illustrated papers, newspapers, magazines, and journals of military interest that are published.

4. There is a well-stocked library in the Institution, from which members can obtain books on loan free. Books are sent out to members V.-P. for the postage.

5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in any part of the world.

6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraia will be awarded by the Executive Committee. Rules for the guidance of contributors will be found in para. IV, Secretary's Notes.

7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.

8. When temporarily in the U. K., Officers of the Indian Army can join the Royal United Service Institution, Whitehall, for a period of six months on payment of half a guinea, or for a period of one year on payment of a guinea.

SALE OF PERIODICALS.

This Institution offers the following periodicals to members on sale for twelve months—1st January to 31st December 1929. The papers will be sold to the members submitting the highest bids by the 31st January 1929. Each issue of the periodicals will be sent to the purchaser as soon as the next issue arrives in Simla. In the case of purchasers in Simla, delivery will be free, otherwise postage will be charged.

Title.	Published.	Cost per copy new.	
		s.	d.
1. The Review of Reviews.	Monthly.	1	0
2. The Empire Review.	"	2	0
3. The Nineteenth Century and After.	"	3	0
4. The Geographical Journal.	"	2	0
5. The United Empire.	"	1	0
6. Blackwood's Magazine	"	2	6
7. The Journal of the R.A.M.C.	"	2	0
8. The Navy.	"	0	6
9. The Export and Commercial Intelligence World.	"	1	0
10. The Cavalry Journal.	Quarterly.	5	0
11. The Asiatic Review.	"	5	0
12. The Royal Engineers' Journal.	"	5	0
13. The British Empire Review.	"	0	6
14. The Fighting Forces.	"	5	0
15. The Journal of the Royal Artillery	"	5	0

AMERICAN JOURNALS.

		Cents.
1. The Canadian Defence Quarterly.	Quarterly.	50
2. The National Geographic Magazine.	Monthly.	50
3. The Coast Artillery Journal	"	50
4. The Infantry Journal.	"	50
5. The Journal of the Franklin Institute.	"	60
6. The Cavalry Journal.	Quarterly.	75
7. Foreign Affairs.	"	\$1 25
8. The Army and Navy Journal.	Weekly.	20

FOREIGN PUBLICATIONS.

1. Revue Militaire Suisse.	Monthly.
2. Bulletin Belge des Sciences Militaires.	"
3. Rivista Di Artiglieria E Genio	"
4. Rivista Militaire Italiana.	"
5. L'Afrique Francaise.	"

ILLUSTRATED PUBLICATIONS.

1. The Times Weekly Illustrated.	Weekly.	4d.
2. The Aeroplane.	"	6d.
3. The Tatler.	"	1 Re.
4. The Sketch.	"	1 "
5. The Bystander.	"	1 "
6. Eve—The Lady's Pictorial.	"	1 "
7. The Illustrated Sporting and Dramatic News.	"	1 "
8. India Monthly Magazine.	Monthly.	1 Re. 4 as.

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I.—New Members.

The following new members joined the Institution from 1st June to 31st October 1928 :—

ORDINARY MEMBERS.

Major W. R. Tylden-Wright.	Lieut. O. V. C. Meysey-Thompson.
Captain C. A. Grey.	Captain D. H. M. Carbery.
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Captain K. P. Smith.
Captain G. R. Kidd.
Captain H. M. Smith.

Lieut.-Colonel C. C. Walker.
Captain H. F. Joslen.
Captain Mir Haidar.
Captain N. R. Taitt.
Revd. J. R. Peacey.
Captain H. W. Deacon.
T. E. T. Upton, Esq.
Major W. E. L. Long.
Captain M. L. Buller.
Captain J. A. H. Bampton.
Lieut. J. Barron.
Lieut. W. W. Kilgour.
Major-General A. G. Stevenson.
Captain C. T. Shaw.
Lieut. W. P. Nicol.

II.—Examinations.

(a) The following table shows the campaigns on which the military history papers will be set from March, 1928, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii):—

Serial No.	2	3	4	5
	Date of examination.	Campaign set for the first time.	Campaign set for the second time.	Campaign set of the last time.
1	March, 1928 ..	Waterloo, 1815 (from the landing of Napoleon in France, 1st March, to the conclusion of operations at Waterloo).	..	Mesopotamia, 1916-17 (as detailed in Army Order 339 of 1925 as amended by Army Order 168 of 1925).
2	October, 1928 ..	Palestine, 1917-18 (from Genl. Allenby's assumption of command, 28th June, 1917, to the conclusion of operations, 31st October, 1918), covered by despatches, dated 16th December, 1917, 18th September and 31st October, 1918, and 23th June, 1919.	Waterloo, 1815 (as given in Serial 1, column 3).	..
3	March, 1929 ..	..	Palestine, 1917-18 (as given in serial 2, column 3).	Waterloo, 1915 as given in serial 1, column 3).
4	October, 1929 ..	Egypt and Palestine, from the outbreak of war with Germany to June 1917.	..	Palestine, 1917-18 (as given in serial 2, column 3).

NOTE.—With regard to Army Order 363 of 1926, the above campaigns will not be divided into general and special periods.

(b) Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2.—*The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. C. G. Powels).

B.—OTHER BOOKS.

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
 The Revolt in the Desert (T. E. Lawrence).
 Allenby's Final Triumph (W. T. Massey).
 How Jerusalem was Won (W. T. Massey).
 Outline of the Egyptian and Palestine Campaigns, 1914-18
 (Bowman-Manifold).
 L'Attaque du Canal de Suez (Douin).
 Army Quarterly—October 1920 (T. E. Lawrence's article).
 Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T.
 Atkinson's articles).
 Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's
 article).
 Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).
 R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's
 article).
 U. S. I. Journal—October 1923 (Captain Channer's article).

3.—The Dardanelles Campaign.

Description.

- | | |
|---|--|
| Naval and Military Despatches .. | A clear account of the operations in detail from the G. H. Q. standpoint. |
| Reports of the Dardanelles Commission. | Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts. |
| The Dardanelles (Callwell) .. | The best account and criticism of the strategic conduct of the campaign. |
| Gallipoli Diary (Sir I. Hamilton) .. | The campaign from the point of view of the C.-in-C. on the spot. |
| Life of Lord Kitchener (Arthur) .. | Throws considerable light on Lord Kitchener's direction of the campaign. |
| The Dardanelles Campaign }
(Nevinson).
Gallipoli (Masfield) | Well written and picturesque accounts by eye-witnesses. |
| The World Crisis (Winston Churchill.) | Explains his part in inception of the campaign. |

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson). point of view of the
C. I. G. S.
- Five years in Turkey (Liman Van Sanders).
- Official Account: Official History of the War, Naval Operations, Vols. II and III.
- Gallipoli Campaign (Outline of Military Operations). By a Student.
- Experiences of a Dugout (Callwell).
- Despatches from the Dardanelles (Ian Hamilton).
- The Navy in the Dardanelles Campaign (Wemyss).

4.—*The Mesopotamia Campaign.*

- The Campaign in Mesopotamia, 1914-18 (Evans).
- Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).
- Critical Study of the Campaign in Mesopotamia up to April, 1917.
- Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
- The World Crisis (Winston Churchill).
- Notes and Lectures on the Campaign in Mesopotamia (A. Kearsey).

5.—*Waterloo Campaign.*

- Waterloo Campaign (J. H. Anderson).
- Waterloo (Hilaire Belloc).
- Wellington and Waterloo (Arthur Griffiths).
- Waterloo the Downfall of the first Napoleon (George Hooper).
- Campaign of 1815 (W. H. James).
- With Napoleon at Waterloo (E. B. Low).
- Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).
- Waterloo Campaign (S. C. Pratt).
- Wellington and Waterloo (G. W. Redway).
- Wellington Campaigns. Peninsula-Waterloo, 1808-1815, also Moore's.
- Campaign of Corunna (C. W. Robinson).

6.—*The American Civil War.*

- Stonewall Jackson and the American Civil War (G. F. R. Henderson).
History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).
History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).
American Civil War (J. H. Anderson).
The 1st American Civil War, 1775-78 (Henry Belcher).
The American Civil War, 1861-64 (John Formby).
History of the American Civil War (J. W. Draper).
Fredericksburg and Chancellorsville (J. E. Gough).
Battles and Leaders of the Civil War (Johnson and Buel).
War of Secession, 1861-62 (G. W. Redway).

7.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

8.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

- A Staff Officer's Scrapbook (Ian Hamilton).
German Official Account.
Lectures on the Strategy of the Russo-Japanese War (Bird).
Question on the Russo-Japanese War (Brunker).
Official Account: The Russo-Japanese War (Naval and Military),
3 Vols., published by Committee of Imperial Defence.
Outline of the Russo-Japanese War (Ross).
A Study of the Russo-Japanese War (Chasseur).
My Experiences at Nan Shan and Port Arthur (Tretyakow).
Outline History of the Russo-Japanese War, 1904, up to the
Battle of Liao-Yang, with Questions and Answers (P. W.).
A Short Account of the Russo-Japanese War ("Footslogger").
An account of the Battle of Liao-Yang (with questions and 10
maps for examination purposes) (Bird).

9.—*The Palestine Campaign.*

- The Official History of the Great War—Military Operations in
Egypt and Palestine, Vol. I, and Maps (Lt.-General Sir
George MacMunn and Captain Cyril Falls).
The Palestine Campaign (Colonel A. P. Wavell).
An Outline of the Egyptian and Palestine Campaigns, 1914-18
(Major-General Sir M. G. E. Bowman-Manifold).
Official History of Australia in the War, 1914-18, Vol. VII, Sinai
and Palestine (H. S. Gullett).
The Desert Campaign (W. T. Massey).

10.—*Organization of Army since 1868.***A.—ORGANIZATION OF ARMY SINCE 1868.**

History of British Army, by Fortescue, Vols. I to XI.

Outline of the Development of British Army, by Major-Genl. Sir W. H. Anderson.

Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

* Notes on the land forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1925.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines, viz., R. U. S. I.

Army Quarterly Journal of the U. S. I. of India, etc.

11.—*Development and Constitution of the British Empire.***A.—THE BRITISH EMPIRE.**

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas, 1917).

The British Empire Series. (XII Volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

* Particularly recommended by the C. I. G. S. for all officers to read.

Forty-one Years in India (Lord Roberts).

History of the British Army (Sir John Fortescue).

General Survey of the History of India. (Sir Verney Lovett).

Citizenship in India (Capt. P. S. Cannon).

India in 1926-27. (J. Coatman).

India (Nations of to-day Series). (Sir Verney Lovett).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominions in India (Sir A. O. Lyall, 1894).

A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).

The Nearer East (Hogarth, 1902).

Modern Egypt (Cromer, 1908).

Egypt and the Army (Elgood, 1924).

The History of Canada (W. L. Grant).

Nova Scotia (B. Wilson, 1911).

Report on British North America (Sir C. P. Lucas).

The Union of South Africa (R. H. Brand, 1909).

Short History of Australia (E. Scot).

History of the Australasian Colonies (Jenks, 1912).

The English in the West Indies (J. A. Froude, 1888).

The Lost Possessions of England (W. F. Lord, 1896).

International Relations of the Chinese Empire (H. B. Mosse).
(Kelly and Walsh, Shanghai).

What's Wrong with China (Gilbert).

Why China Sees Red (Putman-Weale).

Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).

12.—*Military Geography.*

Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).

Imperial Military Geography (Capt. D. H. Cole, 1928).

Introduction of Military Geography (Col. E. S. May).

Imperial Defence (Col. E. S. May).

Main Feature of the Japanese and other Pacific Problems.

(Reprinted from *Morning Post*. Sifton Præd).

Britain and the British Seas (H. J. Makinder, 1907).

Military Geography (Macguire).

Imperial Strategy (Repington).

War and the Empire (H. Foster).

Historical Geography of British Colonies (Dominions), 7 Vols.

(Sir C. P. Lucas, 1906-17)—

Vol. 1, Mediterranean.

Vol. 2, West Indies.

Vol. 3, West Africa.

Vol. 4, South Africa.

Vol. 5, Canada.

Vol. 6, Australia.

Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

13.—*Foreign Armies.*

OFFICIAL.

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- * Handbook of the Polish Army, 1927.
- * Handbook of the Army of the Kingdom of Serbs-Croats and Slovenes (Yugo-Slavia) 1927.
- * Handbook of the Czechoslovak Army 1927.
- * Handbook of the Swiss Army 1924.
- * Handbook of the German Army 1928.

14.—*Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 500 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 509, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet* black. No washes or ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be Taken Away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is now available. Price As. 8 plus postage As. 4.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Ibn Sa'oud of Arabia (Presented by Messrs. Constable and Co., Ltd., London.)	..1928.	Ameen Rihani.
2. India in 1926-1927 (Presented by the Central Publication Branch, Calcutta).	..1928	J. Coatman.
3. History of the Royal Munster Fusiliers, 1652—1922, 2 Volumes.		Capt. S. McCance.
4. Army Lists, 19th Lancers (Fane's 1928 Horse), 1860—1921. (Presented by the Officers 19th K. G. Lancers).		
5. Six British Soldiers (Presented by Messrs. Williams and Norgate, Ltd., London).	..1928.	Sir John Fortescue.
6. The Events, Strategy and Tactics of the Palestine Campaign. (Presented by the Author).	1928	Col. A. Kearsay.
7. A Study of the Strategy and Tactics of the following books:— Tannenburg, American Civil War, May 10th, 1863. Russo-Japanese War 1904, Peninsular Campaign, 1796 Campaign. (Presented by William Kelly, London).	1928.	A. Kearsay.
8. Map Reading for Beginners	..1928.	Major N. M. Carruthers.

BOOKS PRESENTED—(contd.).

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
9. Military Conversations and Official Communications in French, 2nd edition.	1928.	Lieut.-Colonel J. H. Gettins.
10. Reconnaissance Survey from Air-Craft, Paper No. 20. (Presented by the Survey of India, Dehra Dun).	1927.	Lieut.-Colonel G. A. Beazeley.
11. Some Aspects of Mechanization. (Presented by Messrs. William Clowes and Sons, London).	1928.	Colonel H. Rowan-Robinson.

BOOKS PURCHASED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Studies of an Imperialist on War, India and Socialism.	1927.	Lord Sydenham of Combe.
2. Bismarck	..1927.	Emil Ludwig.
3. History of the Somerset Light Infantry 1914—1919.	1927.	Everard Wyrall.
4. Five Years in Turkey	..1927.	Liman von Sanders.
5. The Army and Sea Power	..1927.	Major Pargiter and Major Eady.
6. A Gallant Company	..1927.	Sir John Fortescue.
7. Psychology and the Soldier	..1927.	F. C. Bartlett.
8. The Cable and Wireless Communications of the World.	1927.	F. J. Brown.
9. Propaganda Technique in the World War.	..1927.	H. D. Lasswell.
10. The Statesman's Year-Book	..1928.	..
11. The Gurkhas	..1928.	Major W. Brook-Northey and Capt. C. J. Morris.
12. The Life of Lord Curzon, Vol. II	1928.	Earl of Ronaldshay.
13. The Life of General Lord Rawlinson of Trent.	1928.	Major-General Sir F. Maurice.
14. Stalky's Reminiscences	..1928.	Major-General L. C. Dunsterville.
15. Lawn Tennis	.. ..	F. R. Burrows.
16. National Policy and Naval Strength.	..1928.	Admiral Sir H. A. Richmond.

BOOKS PRESENTED—(*contd.*).

	<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
17.	Airmen or Noahs	..1928.	Rear Admiral F. R. Sueter.
18.	Haji Rikkan-Marsh Arab	..1927.	Fulanain.
19.	Imperial Military Geography, 5th edition.	1928.	Captain D. H. Cole.
20.	From Double to Red Flag	..1928.	P. N. Krassnoff.
21.	Military Organization and Administration, 7th edition.	1928.	Lieut. Colonel W. G. Lindsell.
22.	The Schools of England	..1928.	J. Dover Wilson.
23.	Emden-Story of the Famous Cruiser.	..	Franz Joseph.

BOOKS ON ORDER.

	<i>Title.</i>	<i>Author.</i>
1.	An Appreciation of Lord Haig	.. Sir George Authur.
2.	British Documents on the Origin of the War.	.. Official.
3.	The War in the Air, Vcl. II	.. H. A. Jones.
4.	Falsehood in War Time	.. Ponsonby.
5.	Lord Reading	.. Street.
6.	China in Turmoil	.. King.
7.	Memoirs of Prince Max of Baden.	..
8.	Customs, Manners and Ceremonies of the Hindus.	.. Abbe Dubois.
9.	Life of Lord Curzon, Vol. III	.. The Earl of Ronaldshay.

IX.—Pamphlets.

The following may be obtained by V. P. P., plus postage, on application to the Secretary:—

- (a) British and Indian Road Space Tables (separately), As. 12 each.
- (b) Diagram of Ammunition Supply (india), As. 4.
- (c) Diagram showing New System of Maintenance in the Field at Home, As. 8.
- (d) Military Law Paper, Questions and Answers, As. 4. (As used at the A. H. Q. Staff College Course, 1926).

X.—Schemes.

The schemes in the Institution have been considerably increased and in order to simplify their issue they have been classified and numbered as follows :—

They can all be obtained by V. P. P., plus postage, on application to the Secretary.

(A) *Administrative Exercise, with diagram (Reprinted May, 1928).*

To illustrate the supply system of a Division (suitable for Staff College or Promotion) .. Rs. 2

(B) *Mountain Warfare (Reprinted May, 1928)*

(i) A scheme complete with map and solution .. „ 5

(ii) Three Lectures on Mountain Warfare .. „ 3

(C) *New Staff College Series (Reprinted May, 1928).* Complete with maps and solutions :—

(i) Approach March.

Reconnaissance of night attack.

Orders for night attack Rs. 5

(ii) Outposts.

Defence.

Action of a Force Retiring „ 5

(iii) Move by M. T.

Occupation of a defensive position.

Counter-attack „ 5

(D) *Promotion Series (Reprinted May, 1928).* Complete with maps and solutions.

Lieutenant to Captain—

(i) Mountain Warfare Rs. 5

(ii) Defence.

Attack orders „ 5

Captain to Major—

(i) Outposts.

Defensive position.

Withdrawal „ 5

(ii) Tactical Exercise without troops.

Reconnaissance.

Attack orders „ 5

(E) Course of five lectures given at the London School of Economics, 1925, on “Transportation in War.” As. 12.

(F) Copies of the recent (February 1928) Staff College Examination papers are available :—

Strategy and Tactics Papers with Maps .. Rs. 2 each.

Other papers „ 1 each.

(G) Staff College Course Schemes (1928):—

- (i) A set of three schemes, as given at the Army Headquarter Staff College Course, 1928, complete with maps and solutions, complete set .. Rs. 9
- A limited number of the following papers are available:—
- (ii) Supply Problem (with map and answers) .. Rs. 2 each
- (iii) Military Law Paper (with answers) .. As. 8 ..
- (iv) Organization and Administration—Peace (with notes for replies) 8 ..
- (v) Precis of lecture on Organization and Administration 8 ..
- (vi) Hints on Working for the Examination and on tackling the Tactical Papers 8 ..
- (vii) Lecture on Military Law III—Precis 8 ..
- (viii) Precis of Lecture on Reinforcements in War 8 ..
- (ix) Precis of Lecture on Night Operations 8 ..
- (x) Precis of Lecture on Bush Warfare 4 ..
- (xi) Waterloo Campaign 1815 (with map) .. Re. 1 ..
- (xii) Precis of Lecture on East Prussian Campaign, 1914—(I.—Battle of Tannenberg) .. As. 8 ..
- (xiii) Precis of Lecture on East Prussian Campaign, 1914—(II.—The Battle of the Masurian Lakes; and General Lessons) 8 ..
- (xiv) Precis of Lecture on Palestine Campaign 12 ..
- (xv) Lecture on R. A. F. Organization and General Employment 8 ..
- (xvi) Lecture on R. A. F. Co-operation with the Army 8 ..
- (xvii) Precis of Lecture on the Employment of Cavalry with a Brigade of all Arms 8 ..
- (xviii) Precis of Two Lectures on the Organization of the British Army 8 ..
- (xix) Precis of Lecture on Ordnance Services with Special Reference to Movement on Transportation 8 ..
- (xx) Precis of Lecture on the Dominion Forces 8 ..
- (xxi) Precis of Lecture on the Armoured Force 8 ..
- (xxii) Precis of Lecture on the Auxiliary and Indian Territorial Forces 8 ..
- (xxiii) Precis of Lecture on the Artillery Organization .. 8 ..

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

XI.—Gold Medal Prize Essay Competition.

1928.

The Council has made the following awards in this year's competition :—

Major K. F. Franks, D. S. O., 5th Royal Mahrattas, Gold Medal and Rs. 100.

Major J. Mc L. G. Taylor, 10/6th Rajputana Rifles. Rs. 50.

1929.

The Council has chosen the following alternative subjects for the Gold Medal Prize Essay for 1929 :—

(i) In future campaigns on the frontier we may encounter tribesmen, either equipped themselves with, or supported by other troops possessing modern artillery and aircraft. How can we best, both on the march and in bivouac, combine protective measures to safeguard ourselves against tribal tactics, as we have known them in the past, supported by such modern weapons,

or

(ii) Outline the best method of supplying a combined mechanised ground force and air force operating at a considerable distance (150—250 miles) from a railhead with no metalled road communications, no local mechanical or petrol facilities, and practically no local supplies except water.

The following are the conditions of the competition :—

(1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army and Royal Air Force or Auxiliary Forces, who are members of the U. S. I. of India.

(2) Essays must be printed or type-written and submitted in triplicate.

(3) When a reference is made to any work, the title of such work is to be quoted.

(4) Essays are to be strictly anonymous. Each must have a motto and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.

(5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1929.

(6) Essays will be submitted for adjudication to the three Judges chosen by the Council. The Judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution of the medal. The decisions of the three Judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.

(7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1929.

(8) All essays submitted are to become the property of the United Service Institution of India absolutely and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.

(9) Essays should not exceed 15 pages of the size and style of the Journal exclusive of any appendices, tables or maps.

By order of the Council.

J. C. SMYTH, MAJOR,

*Secretary, United Service Institution of
India.*

Simla 1st October 1928.

Prize Essay Gold Medallists.

(With Rank of Officers at the date of the Essay).

- 1872..ROBERTS, Lieut.-Col. F. S., v.c., C.B., R.A.
 1873..COLQUHOUN, Capt. J. S., R.A.
 1874..COLQUHOUN, Capt. J. S., R.A.
 1879..ST. JOHN, Maj., O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., s.c.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry.
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cavy. Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver Medal).
 1899..NEVILLE, Col. J. P. C., s.c.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905..COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., R.A.
 1909..MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a Silver medal).
 1911..Mr. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q.V.O. Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., v.d., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., M.C., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923..KEEN, Colonel F. S., D.S.O., I.A.
 1926..DENNY'S Major L. E., M.O., 4/12th Frontier Force Regiment.
 1927..HOGG, Major D. Mc. A., M.C., R.E.
 1928..FRANKS, Major K. F., D.S.O., 5th Royal Mahrattas.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* N. B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
 RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
 JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (especially awarded a gold medal).
 FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894..O'SULLIVAN, Major G. H. W., R.E.
 MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
 GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COOKERILL, Lieut. G. K., 28th Punjab Infantry.
 GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
 SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
 ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
 MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
 GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
 SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
 TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
 GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
 MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
 MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
 GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
 SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
 MALANG, Havildar, 56th Punjab Rifles.
- 1909..MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(conold.).

- 1910..SYKES, Maj. M., c.m.g., late 2nd Dragoon Guards (specially awarded a gold medal).
 TURNER, Capt. F. G., R.E.
 KHAN BAHADUR SHER JUNG, Survey of India.
- 1911..LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
 GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..PRITCHARD, Capt. P. P. A., 83rd Wallahabad Light Infantry (specially awarded a gold medal).
 WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.
 MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..ABBAY, Capt. B. N., 27th Light Cavalry.
 SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
 WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..BAILEY, Capt. F. M., I.A. (Political Department).
 MORSEHEAD, Capt. H. T., R.E.
 HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
 ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..ABDUR RAHMAN, Naik, 21st Punjabis.
 ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917..MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918..NOEL, Capt. E. W. C. (Political Department).
- 1919..KEELING, Lt.-Col. E. H., m.c., R.E.
 ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920..BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
 AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..HOLT, Major A. L., Royal Engineers.
 SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..ABDUL SAMAD SHAH, Capt., o.b.e., 31st D. C. O. Lancers.
 NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
 SOHBAT, Head Constable, N.-W. F. Police.
 HARI SINGH THAPA, Survey Department.
- 1924..HAVILDAR RAHMAT SHAH, N.-W. F. Corps.
 NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..SPEAR, Captain C. R., 5/13th Frontier Force Rifles.
 JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..HARVEY-KELLY, Major C. H. G. H., d.s.o., 4/10th Baluch Regiment.
- 1927..LAKE, Major M. C., 4/4th Bombay Grenadiers
- 1928..BOWERMAN, CAPTAIN J. F., 4/10th D. C. O., Baluch Regiment.
 MUHAMMED KHAN, Havildar, Zhob Levy Corps.

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EDITORIAL.

In an article in the current number of the Journal Major N. L. Mitchell-Carruthers puts forward very clearly the case for the adoption of a biennial system of training in the Indian Army. This scheme has found favour in many quarters and has certain obvious advantages. There is no doubt that the modern training year in the Indian Army is somewhat of a rush and it is only by intensive work that the multifarious duties which have to be taught to the present day Indian soldier can be got through in the time. As Major Mitchell-Carruthers states, it would be comparatively simple were the training year to consist of 365 working days but, as he shows conclusively, the Indian soldier only gets 160 training days in the year and the British officer, who has to do most of the training gets 191 training days—at a very conservative estimate.

The biennial training scheme has, however, several serious disadvantages. After a few years, what with transfers of units among the different commands, allowances being made for differences of climate and training facilities in the various stations, some units coming from overseas stations, etc., the units of the Indian Army would soon all be at different stages of training at different times of the year and any systematic training in brigade or higher formation would be almost impossible. Also there would be the difficulty of British units training on the annual system and Indian units on the biennial.

The scheme put forward by Major Mitchell-Carruthers has, however, many points of interest and there is no doubt that the tendency is for training to become too complicated and there may then be a

danger of the soldier knowing a little bit about everything but knowing nothing thoroughly.

This tendency is quite realised and efforts are always being made to keep training as simple as possible and to omit all unnecessary complications.

* * * * *

The advent of mechanised transport is going to affect mountain warfare, as we know it to-day, to a considerable extent.

That well known saying "An army marches on its stomach" is generally accepted among soldiers and nowhere is it more self-evident than in mountain warfare. The long strings of camels and mules have always been the bugbear of every frontier force commander just as they rejoice the heart of the opposing tribesmen.

Not only have these hordes of animals been a constant anxiety and handicap on the line of march but they have been an equally great source of trouble in camp.

It is fortunate that, in the evolution of war, one invention is generally forthcoming to counteract another. If, with the probability of aeroplanes and long range guns being used in our future wars on the frontier we had still to feed our troops entirely by means of animal transport, the outlook would indeed be a gloomy one and the problem of siting a perimeter camp which would at the same time be protected against small arms fire and protected or concealed from air attacks would make any commander tear his hair. With the replacement, however, of the camel and the A. T. cart by mechanised transport the problem will not be nearly so difficult, although still being far from an easy one to solve.

* * * * *

A very interesting lecture was given recently at our sister institution at Home by Major-General Sir Edmund Ironside on "The modern staff officer."

He touched on several interesting points, firstly, with regard to the almost total lack of staff work which existed in our army before the Boer war, and secondly with regard to the evolution of the modern staff officer and what is expected of him to-day. He states that the staff college was resuscitated, commencing from 1902, by Lord Rawlinson, Sir Henry Wilson and Sir William Robertson. It is

very seldom realised that the man who did most for the staff college, and to whom has been attributed the beginning of co-operation between the Navy and the Army, Lord Rawlinson, was only 39 years of age when he became commandant.

At this age, in the Indian Army, an officer has just become a substantive major. The following two points, given from Major-General Ironside's experience as commandant of the Staff College Camberley are of considerable interest. He considers the entrance examination very stiff indeed—in fact a certain number of officers arrive at the College quite worn out—but it was his experience that, on the whole, nominations did not provide the best officers; they produced some officers of outstanding brilliance but many indifferent officers, whereas the officers who passed in by competition were generally of a higher average standard. This forms a strong argument against any idea of abolishing the examination and filling the Staff College entirely by nomination.

Our present system of selection by competitive vacancies and nomination from among those qualified has certain disadvantages but it would be hard to devise any other system at once so fair to the individual and at the same time productive of such good results.

Also, it must not be forgotten, that our present system results in several hundreds of officers yearly educating themselves up to a high standard of military knowledge—at no expense to the state—which they would never do without the incentive of the Staff College Examination before them.

He has much to say about specialisation and its evils—at any rate in the case of junior staff officers.

It is difficult to imagine any officer who has passed through two years at the Staff College being narrow minded or working in a watertight compartment but junior staff officers should certainly be changed over from one Branch to another during their first few years on the staff. Probably the best combination for a first staff tour is two years Staff Captain followed by two years Brigade Major.

It is, however, rather a debatable point whether, after having experience of two branches of the staff, he then specialises enough. This is an age of specialisation and there is no doubt that an officer who has done an appointment as D. A. Q. M. G. will, after a spell back with his regiment, be likely to be far more valuable to the

Army as an A. Q. M. G. than as a G. S. O. 1. From the point of view of the training of the individual officer the more varied experience he gets the better.

General Ironside also mentions the vexed question of whether a commander should be allowed to choose his own staff or not. Our present system is, in theory, that he should not but, in practice, it often happens, and will often happen that he will. It is very important that a staff should be a team and, just as the captain of a polo team or any other team does not always choose the most brilliant performers but those which will fit in and combine the best, so a commander would often rather have the sound staff officer whom he knows and understands rather than the unknown quantity only known to him by reputation. A staff officer has, in peace time, both to deal with the business in hand and to look ahead and think about the future. The trouble is that there is so much business in hand that it is not easy to make time for thought. Also the junior staff officer has at all times to keep himself fit and hard enough to go back and do a long day with his company and perhaps sleep out in a wet field without a blanket. Here again it is not always easy to make time for exercise and, as General Ironside says, our officers require more exercise than foreigners, who seem able to go on day after day without it.

* * * * *

In our last number we mentioned the disappointing results achieved by India in the Olympic games this year and the obvious lack of organisation and training which resulted in sending such an indifferent lot of athletes from this country when there must be better material available.

In a very frank article to the *Civil and Military Gazette* Colonel Bruce Turnbull, late Inspector of Physical Training in India, comments forcibly on the waste of money in sending such an indifferent team "none of whom seemed sufficiently keen to keep in good condition or learn from the various experts with whom they came in contact."

The experience gained this year will no doubt spur on the Indian Olympic Association to greater efforts and, with the example and achievements of the Indian Hockey Eleven before them, they will doubtless accomplish something better at the next Olympic Games.

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THE GOLD MEDAL PRIZE ESSAY, 1928.

By

MAJOR K. F. FRANKS, D.S.O.

SUBJECT.

The stopping power of modern small arms weapons, combined with the increasing difficulty of obtaining draught animals are leading to progressive mechanisation in the Army at Home.

Bearing in mind the tasks the Army in India may have to carry out in war, both in the defence of her frontiers, internal security, and the possible provision of an expeditionary force for service in an Eastern theatre, consider the necessity for increased mechanisation of the Army in India and suggest the directions in which it can most profitably be employed with due regard to economy.

* * * * *

The stopping power of modern small arm weapons is greatest when the defending force can choose its ground, and has ample time to organize the defence thoroughly in a position which has to be attacked frontally. Such conditions demand safe flanks and a long time to prepare. In order to break through such a defence, an armoured force, supported by a mass of artillery, is essential.

The factors which induce the maximum stopping power of small arms can be eliminated by other methods than by the use of A. F. Vs. namely, by manœuvre and covering fire.

Rapid and sustained manœuvre will keep the enemy in a state of indecision as to where the blow will fall. This will deny the time necessary for the organization and preparation of his defensive position, and will entail fighting in hastily prepared cover or in the open, thereby becoming more and more susceptible to the protective fire of the attack. This power of manœuvre, combined with adequate covering fire, will overcome the present disproportionate power of the defence.

Adequate covering fire will involve an increase of the divisional artillery, of rounds carried, and of Vickers guns in infantry units; all of which will enhance the weight to be carried in the transport.

Rapid and sustained manœuvre by an army demands the highest mobility throughout its whole organization, including its L. of C.

Mobility is made up of two components, speed and flexibility. Speed means the ability to move for long periods at the best pace of the slowest moving fighting troops, i.e., the infantry. Flexibility includes the power to move in any direction, in which case the whole organization must be independent of roads.

THE ARMY IN INDIA.

This exists primarily for the defence of India, whose most vulnerable frontier is that on the N. W. For the rôles required of it the Army in India is divided into Covering Force, Field Army and Internal Security Troops.

The Covering Force is a purely defensive force for the protection of the frontier, which it has to maintain unsupported while the Field Army is mobilizing. Thereafter there will be a striking force co-operating.

The Field Army provides a striking force to the covering troops as well as an Expeditionary force if required.

Internal Security Troops comprise a large proportion of the British infantry, a number of Indian battalions, a few cavalry regiments and the 3rd section of batteries, mobilized generally with improvised transport. On the outbreak of war all these units provide personnel for administrative units which are brought into being or expand on mobilization. Thus depleted the Internal Security Troops provide attenuated garrisons for important localities, protection for strategic railways and movable columns to deal with riots and disturbances generally in India.

The Covering Force therefore, will be engaged on mobilization, purely in mountain warfare and its rôle implies an active defence. Although the past history of India is a series of invasions through the northern passes, a repetition on any large scale in modern conditions is more than improbable. In the past these mountain masses were purely a physical obstacle, but now they are a defended obstacle, which is a very different matter.

To carry out its rôle successfully the covering force requires mobile columns up to a maximum strength of a brigade of all arms, but they must be really mobile. This they cannot be while they have to rely entirely on pack transport for maintenance from a distant base.

The government policy of road-making in tribal territory is a move in the right direction. It allows maintenance by road M. T. up to where the force leaves the road, thus reducing pack supply columns, and giving a wider radius of action. If the country could be fully opened up by roads many of the present difficulties would disappear. M. T. roads, however, are very expensive to make and maintain, besides being slow in building.

Tracks fit for 6-wheeler M. T. are comparatively cheap in initial outlay and maintenance and are much speedier to construct. A much greater network of such tracks could be made through tribal territory at an equal cost to projected M. T. roads. These would make the fighting columns a great deal more mobile and give them a wide radius of action.

The terrain is not suitable for the employment of an armoured force, with the exception of armoured cars in small packets in the special circumstances explained in *Indian Addendum to Tank and Armoured Car Training, Volume II (War) 1927*. The opportunities for their effective use will be greatly multiplied when modern 6-wheeler armoured cars arrive in this country and the tracks advocated above are constructed.

The Field Army may have to operate in any of three different sets of circumstances, *i.e.*, *via* the Khyber, Chaman, or through the mountainous tribal territory between these two.

Through the Khyber, there is a railway to Landi Kotal and an indifferent M. T. road for some distance beyond.

The country on the Chaman side is generally open and a kuchcha road exists which would take 6-wheeler M. T. without difficulty. In order to move a force by this route at any reasonable rate in present circumstances, masses of animal transport will be required. The collection and concentration of the required amount will be a very slow business, and in the result the force's mobility will be low.

The country between these two routes is mountainous, practically devoid of roads, and with poor rearward communications.

An armoured force is unsuitable for operations across the frontier owing to terrain, except west of Chaman. Taking into consideration the opposition likely to be met with and the open nature of the country it will not be necessary in this area, provided the force is fully mobile.

The Expeditionary Force may have to meet a modern force anywhere east of, say, the Dardanelles. The main feature of any such theatre is an insufficiency of roads and a paucity of railways. In order to compete with a modern force, with which it may be assumed are A. F. Vs., either an armoured force is necessary or a very efficient anti-tank organization.

The time has not come, nor is the money available, for the complete mechanization of the expeditionary force, that is to say, to put the whole force on to wheels or tracks. The armoured force, therefore, will be a portion of the expeditionary force, a very strong reserve of power, working in co-operation with infantry, cavalry, and animal draught, which means that its mobility will depend on that of infantry. The lower the mobility of a force, the greater will be the power of the enemy in defence, and the greater will be the attackers losses, both in men and A. F. Vs.

The basis of all calculations for mobility must be the infantry. This can be taken as 100 miles in a week and 320 miles in a month. Were the expeditionary force able to achieve that in a theatre of war deficient in roads and railways, money spent on an armoured force would be well spent, otherwise it would be luxury spending.

The experience of Mesopotamia, and of manœuvres in India since the war prove conclusively that such a standard is not obtainable, and that the cause is the transport services. The first call on the military purse in India is therefore to speed up the transport services. This cannot be done while animal transport alone is relied on, mechanization of the transport, at least in part is essential.

IMPERIAL ASPECT.

There are other aspects of the armoured force question and India which need referring to before reaching a decision. The armies of the Empire must be organized, broadly speaking, on the same lines, against the eventuality of another 1st Class War, secondly, the British garrison in India is furnished and relieved on the Cardwell system. While this system is maintained it is necessary that units in India and at Home are similarly organized. Recent developments at Home will compel a certain amount of mechanization in British units in India. This has already begun and may be expected to continue, but this mechanization is in the main for the benefit of the British Army at Home. The mechanization and speeding up of the

fighting troops in India is of little value until the rearward services are speeded up to a corresponding mobility.

The first paragraph of the term of this essay is a quotation applicable to the United Kingdom. The same conditions do not pertain to India.

India at present is neither an industrial nor mechanical country, and the original vehicles, all maintenance stores, personnel, reinforcements and workshops for an armoured force will have to come from England, which will raise the initial and recurring cost of an adequate armoured force to a prohibitive figure.

Large quantities of the types of animals now used by the Army in India are available; the defence of the mountainous North-West Frontier will preclude, probably for many years, the mechanization of a large portion of her forces.

The situation therefore is this:—An armoured force is not an essential for the defence of India. It would be, however, of very great value to the expeditionary force for Imperial purposes when the latter had reached its full mobility. Army financial conditions in India debar the possibility of both raising an armoured force and of speeding up the Army's transport by mechanization. The latter is a very urgent necessity.

All the money that India can find for mechanization ought to be spent on (1) the speeding up of the transport, (2) the provision of such A. F. V.'s as will be of actual benefit to the Army in India as a whole, (3), the mechanization of British units to the extent necessary to conform to Home practice.

The provision of an armoured fighting force when it is required ought to be the care of the Imperial Government.

TRANSPORT IN INDIA.

Of our present transport in India, all M. T. is of the 4-wheeler type and confined to M. T. roads, although 6-wheeler transport is undertrial and will probably be introduced in the near future. Mule (pack and draught) moves at the same pace as infantry. The A. T. cart is astonishingly mobile across country provided that it marches independently of fighting troops, can pick its way and make its own pace. Camel transport is slower than infantry. All this animal transport can keep pace with the fighting troops of a division if pace is reckoned by an average days march and not by miles per hour.

If the days march completed the work of the transport, animal transport would be as mobile as the troops but at the end of the days march the transport has to find units and deliver to them, has to go back and refill; and under our present system has to march with or just behind the fighting troops, getting checks at unsuitable times or being blocked for hours. These are the reasons for the delays caused by transport and why animal transport is not as mobile as the fighting troops.

The present organisation of divisional transport and the detail of loads carried are directly attributable to the characteristic slowness of replenishment from animal transport. Mechanical cross-country transport brings into being a new speed characteristic. Therefore, the present ideas on the divisions and sub-divisions of transport in the field must be put aside and a new organization worked out based on the fact that the new type of transport can complete a normal days march in under two hours.

The transport of a division cannot, however, be entirely mechanized because there may come the need to revert to pack, and there is a large amount of animal transport available which it would be uneconomical to abolish.

TRANSPORT REORGANIZATION PROPOSALS.

Based on these factors I would support that the reorganization of transport should be as follows :—

- (a) An echelon of animal transport moving generally one day in rear of the troops. This I call the mobile magazine. This carries :—
 - (a) One days maintenance for the whole force, i.e., rations, ammunition, etc.,
 - (b) the non-expendable stores of the whole force, such as kits, greatcoats, tents, etc.
- (b) A six-wheeler motor carrier service between this magazine and the troops. The vehicles are not allotted to particular loads, or formations, but work as a pool to carry what loads are required to whatever unit or formation need them.
- (c) A bulk carrier service of six-wheeler motor transport working in one or more echelons between railhead and the mobile magazine.

This abolishes transport marching with the fighting troops, with the exception of unit transport and 1st line pack mules for immediate necessities. This last reduction is made possible by the speed with which replenishment can be carried out by the carrier service from the mobile magazine, *e. g.*, an Indian infantry's first line transport will be reduced by 17 carts.

Several other advantages all helping mobility accrue from this system, *e. g.*,—

- (1) The difficulty of hot meals for the troops is got over.
- (2) The majority of animals being with the mobile magazine, they can be fed direct by the bulk carrier service. This reduces weight and volume to be carried by this mobile magazine, and reduces very greatly the amounts to be handled by the forward carrier service.
- (3) Weight carried, owing to speed of replenishment is reduced all along the line.
- (4) All this reduction of weight and bulk enables more gun ammunition to be actually carried, at the same time replenishment is speeded up.
- (5) Transport is available to convert a large portion of the Division on to a pack basis in case of necessity.

This mobile magazine will, of course, require special troops detailed for its protection. Their composition will depend on the nature of the enemy, but a proportion of pioneers to march with this transport are essential.

COVERING FORCE TRANSPORT.

The transport of the covering force needs different treatment. Its first echelon must be pack. The object is to reduce the length of this echelon, by replenishing at frequent intervals from M.T. This can be done only by running branch tracks, capable of taking 6-wheelers, from the present main roads, and so open up the country as far as possible to this form of M. T., either to supply the force direct from the rear or to allow it to tap in. In this case the M. T. will require to be protected by armoured cars.

M. T. MAINTENANCE AND SUPPLY.

A product of mechanization on a large scale is the necessity for well organized repair and overhaul shops, provision of spares, etc.

If the army's types of carrier machines can be popularized amongst the civil population, a civil maintenance service will come into being automatically to the army's great advantage.

In the circumstances of this country, namely long distances and poor road communications, 6-wheeler M. T. is the ideal form, as has been proved in similar countries. The cost of building and maintaining an immense number of 4-wheeler M. T. roads will throw a very heavy burden on rates and taxes, and so, on the general population for the benefit of M. T. users.

There are three methods by which 6-wheeler M. T. can be introduced into general civilian use. First by propaganda as to their value, uses, and economy of upkeep, secondly, demonstrations all over the country with army vehicles, as was done successfully in 1910* with 4-wheelers; thirdly, subsidies for suitable types and the abolition of import duty for a period of years. Thus a reserve will be built up at comparatively small cost, and with the reserve a civil maintenance service for the particular types required for army use.

The next point regarding economy is to keep the number of types to the minimum. Excluding A. F. Vs., only two types will be required for a number of years, namely a 30 cwt. and a three ton six-wheeler, for forward, and rear services, respectively.

This will cheapen maintenance, reduce the weight to be carried for field repairs, and make vehicles interchangeable throughout the service.

Lastly, when the types are definitely decided on, if a long contract for their supply were put out for tender, the firm which obtained that contract would find that it would pay them to open workshops out here. In the first instance these would be for assembling and repairs only, but in course of time they would probably increase until a great deal of the manufacture could be carried out in India. Such an undertaking would be of great benefit to the country, would cheapen production costs and would greatly lessen the danger of failure of supply in the case of a big war.

A. F. V's.

The only type of A. F. V. which is a necessity to the Army in India is the armoured car, but they must be mounted on cross-country chassis. Every portion of the Army in India requires them, Field

* "Motor Transport and the Empire" 1913, p. 64.

Army, Covering Troops and Internal Security Troops. In open warfare their value is acknowledged. As tribal territory is opened up by tracks for cross-country M. T., their value with the covering force will be greatly increased. For internal security work, their value has been proved in this country and their use to suppress civil riots was brought to a fine art in Shanghai, *vide* U. S. I. (I) Journal for March 1928. There are insufficient companies in India to meet all requirements. A certain number could be added economically by the conversion of certain British cavalry units.

ANTI-TANK ORGANIZATION.

Growing up with a thoroughly mobile army in India, a thoroughly efficient anti-tank service is necessary for the field army. On all counts it is time that the present makeshifts were abolished, and an anti-tank organization on which the army could rely, inaugurated. The cost will be comparatively small and its non-inclusion in the reforms will be liable to immobilize the army at a critical juncture, and in the end, not only cause great loss of life, but entail enormous expenditure in the hurried raising of an armoured force, should the situation be retrievable.

INTERNAL SECURITY TROOPS.

Internal Security Troops have been left to the last because their organization depends on that of the Covering Force and Field Army and their opponents will be the least well armed. The duties are explained at the beginning of this article.

Bound up with the subject of their composition are questions as to the proportion of British Garrison, war reserve for expansion, and the use of the Indian Territorial Force, which are beyond the limits of this essay. The only point which requires mention here is that of the Movable Columns. There is no doubt that a section of cross-country armoured cars, against which mobs are completely impotent, perhaps conveying a small detachment of infantry in local motor transport, will be a great deal more effective than the present movable but non-mobile columns.

SUMMING UP.

The principal factors which will determine the degree of, and lines of, advance in mechanization to counter-act the power of modern defence are —

- (a) The Army in India's tasks and standard of efficient organization.

- (b) Its potential enemies and their armament.
- (c) Terrain.
- (d) The retention of Imperial unity of military organization.
- (e) The state of the civil M. T. industry in India.
- (f) Economy.

Having examined these, it is considered that the time has not yet arrived for the introduction of an armoured force.

The line of advance suited to India is the speeding up by mechanization of the transport and maintenance services, which will—

- (a) give full mobility to the army ;
- (b) permit increased artillery fire power ;
- (c) induce a civil cross-country transport industry into India.

The only type of A. F. Vs. required by India is a cross-country armoured car. In addition, an efficient anti-tank organization is essential as the best and most economical answer to enemy A. F. Vs.

LANGUAGE STUDY IN THE FAR EAST.

By

BREVET-MAJOR B. R. MULLALY.

PART I.

Since his return from a course of language study in Japan, the writer has been so often asked why he went, how he liked it, what he hoped to get out of it, and a number of similar questions, that there appears to be room for a brief description of the life of a language officer in the far east, which might be useful to others who are considering the advisability of undertaking a similar course.

The regulations governing courses of language study in China and Japan are contained in "Regulations relating to the study of Foreign Languages," to which those interested should refer for details as to age, qualifications, allowances, etc.

In this article it is proposed to describe, in general terms, the life of a language officer in Japan and China, with particular reference to the former.

The language officer will probably arrive in Japan about the middle of March, one of the most pleasant seasons of the year, and will have his first glimpse of Japan at the entrance to the Straits of Shimonoseki.

The voyage thence, through the Inland Sea to Kobe will give him his first experience of Japanese scenery and, especially if he is lucky enough to pass through the most interesting part in daylight, he will hardly fail to be charmed by the beauty of this scenic gem with its myriads of pine-clad islets.

Kobe will probably prove a disappointment, and the newcomer will sympathise with the French Officer who landed there with the writer and after a walk through the uninteresting streets of this typical seaport town, exclaimed "But where is *Madame Chrysanthème*?"

The subsequent journey by rail to Tokyo, where the line follows closely the old Tokaido, the historic Eastern Sea Road, which runs from the ancient capital of Kyoto to Yedo, the modern Tokyo, and which, in the feudal period, was the great highway of the country, will be full of interest.

The newcomer will, for the first time, see something of the Japanese countryside with its picturesque villages and farm-houses,

and the orderly ricefields, at this season of the year, a vivid green, which are such a characteristic feature of the Japanese landscape.

If the weather is kind, fine views of the incomparable Fujiyama, for centuries the inspiration of Japanese artists and poets, will be seen from the train.

Arrived in Tokyo, the language officer will feel that he has started his new life in earnest.

The first problem will be where he is to live.

This, of course, depends entirely on the Military Attaché, but the new arrival is certain to find that, for obvious reasons, he is discouraged from living in either Kobe or Yokohama, where the majority of the foreigners reside.

He will most likely start by living in Tokyo where he will find the best teachers and where it will be easier for him to adapt himself to his new surroundings.

It is unlikely that he will either desire, or be able to afford, a foreign-style house, the rents of which are very high, and will probably set up his establishment in a small Japanese house in one of the residential quarters of the city, the discomfort of a purely Japanese style of living being mitigated by the adoption of foreign furniture and a cook accustomed to preparing foreign food.

In most cases it is possible to take over the house, furniture and servants of another language officer who is finishing his time. Once installed in his new abode, the language officer will want to commence his study of the language in earnest.

The Military Attaché and fellow language officers will find him a teacher and set his feet on the stony path of acquiring the language.

So much depends on the individual that it is impossible to lay down any hard and fast system of study, but the majority will find that the best results are obtained by working to a time-table.

Too intensive study in the early stages is usually a mistake and leads to that "fed-up" feeling which follows concentration on a difficult subject, and, moreover, it takes some time for the average officer to accustom himself to that close application to books, which he must acquire if he hopes to do any good at Japanese.

For the first few months, then, steady, but not too hard, work at books, and a great deal of walking abroad, absorbing atmosphere,

will generally be found the best plan. If the beginner has an aptitude for learning languages, as he presumably has, the very difficulty and complexity of Japanese will fascinate him, and he will soon feel the zest of striving to reach the unattainable namely, complete mastery of what is, without doubt, the most complicated language in the world.

About the first week in April, the cherry blossoms are at their best in Tokyo, and the newcomer will have an opportunity of seeing the Japanese people in holiday mood, as they throng the parks and gardens wherever the blossoms are to be found, intent on enjoyment and the traditional "flower-viewing."

The language officer, by virtue of his being an Honorary Attaché to the British Embassy, will attend the annual Imperial Cherry Garden Party at the Akasaka Palace, where the double cherry blossom is to be seen at its best, and will have the honour of being presented to Their Imperial Majesties The Emperor and Empress and other members of the Imperial Family, and will see all the highest in the land.

This privilege of being an Honorary Attaché is a very valuable one and gives the language officer a definite official status which does much to assist him in his intercourse with Japanese of all classes.

It is not necessary to warn an officer not to presume too much on the privilege lest he invite the crushing retort which a certain Ambassador once administered to a too presumptuous Honorary Attaché who also happened to be a cadet of a noble house—"Lord Blank, it appears to be necessary to remind you that an Honorary Attaché is the lowest of God's creatures."

Towards the end of May or early June, most foreigners try to escape from the cities and there is a wide choice of summer resorts.

His individual inclination will take the language officer either to Chuzenji, the beautiful lake in the mountains above Nikko, and the favourite resort of the Diplomatic Corps, where he can enjoy sailing and bathing, and excellent trout fishing in the neighbouring river and mountain lakes; to Lake Hakone, in the hot-spring district, to Karuizawa, where there is tennis and a great variety of walks, including the ascent of the active volcano of Mount Asama; to the Japanese Alps, where there is climbing amidst enchanting scenery or to one or other of the many seaside resorts.

Some prefer to spend several weeks of the summer in walking tours, of which there is an endless variety, and there is no more delightful or better way of gaining a knowledge of the people and their customs.

It is often a good plan to take as a companion a Japanese student, many of whom are only too pleased to spend a vacation in this way, in exchange for their expenses and a little English conversation. The experience of meeting various types of Japanese, and the necessity for making one's wants known on the road and in the inns, is very valuable, and a few weeks spent in this fashion will do more to improve one's fluency in the spoken language than months with books and a teacher, provided that one can overcome one's self-consciousness and make a point of losing no opportunity of conversing, however haltingly, with all and sundry.

The autumn is the best season of all in Japan and a visit to Nikko in October is strongly to be recommended for the visitor can then combine a study of the famous shrines with a view of one of the most enchanting sights in Japan—the wonderful colouring of the maples on the road to Chuzingi when the mountain side is aflame with the gorgeous tints of the turning leaf.

At the end of his first year the language officer will be required to take his first examination. Having successfully passed that, he will feel he is beginning to get a real grip of the language, and will pass on to a closer study of the written language and begin to tackle newspapers and military manuals.

By the end of the following summer he will have become sufficiently proficient to be able to benefit by his attachment to the Japanese Army.

This is, without doubt, the most interesting period of the whole three years.

The officer will be attached, usually for six months, to a unit of his own arm of the service.

The actual unit is decided upon by the Military Attaché, in conjunction with the Japanese authorities, and allocation is usually made of a unit to which no other British Officer has been attached for some years previously.

After the first feeling of strangeness has worn off, the British officer will find that his Japanese comrades are always eager to make

his stay amongst them a pleasant and instructive one, and the value which he derives from his attachment varies in direct proportion with the degree of cordiality of his personal relations with them.

His responsibility is great. He will probably be the first British officer with whom the great majority of the officers of the regiment have come into direct contact.

To them, therefore, he represents the British Army, and the impression which he leaves behind him may have far-reaching results.

He will find that the Japanese officer is tremendously keen on his profession and a very hard worker, and the nearest way to win his confidence is to show him that the British officer is no whit behind him in this.

The attached officer will be asked innumerable questions regarding our own army, his opinion will be asked on every conceivable subject, and he will often be asked to draw comparisons between the Japanese Army and our own. On these occasions frankness is always welcomed and the officer who indulges in fulsome compliments on all occasions will soon discover that interest in him rapidly wanes.

Whatever he does he will invariably be treated with the utmost correctness, for he is a guest, and the spirit of hospitality is highly developed in the Japanese. It is when he is accepted as a friend, and is allowed to see something of the real character of his Japanese comrades that he will experience that keen pleasure which comes from the frank interchange of ideas between men of different races, and he will carry away with him an unforgettable memory of comradeship.

In the period of six months the attached officer will have an opportunity of seeing several ceremonies which will give him a good insight into the deep patriotism which animates all ranks of the Army, such as the anniversary of the successful conclusion of the battle of Mukden in the Russo-Japanese War; the ceremony of receiving the new class on joining the colours, and the celebration of the New Year, when all officers of the garrison assemble in the officers' club to drink the health of the Emperor and Empress.

If he is lucky he will be present on the birthday of the regiment when, after a ceremonial parade and the saluting of the colours, the remainder of the day is given over to sports and general festivity,

He will, of course, accompany the regiment on route marches and tactical exercises and will be given an opportunity of seeing for himself the remarkable marching power and endurance of the Japanese soldier, especially during the prolonged route marches which take place twice a year and are deliberately timed so as to synchronize with the hottest period of the summer and the coldest period of the winter.

He will have his midday meal in the Officers' Mess on most days and will, naturally, mess and be billeted with the officers of his company, etc., when out of barracks.

He will probably find it hard to accustom himself to a purely Japanese diet when he first goes out but will soon learn to ask for certain dishes which he knows he can assimilate.

The period of attachment will pass all too quickly and it will be with real regret that the British officer will part from his Japanese comrades, and moreover, if he is of the right type, he will be made to feel that the regret is mutual.

During his third year, if he is lucky, the language officer may be attached again for a short period either to one of the Specialist Schools or to the Headquarters of a Division, and may be lucky enough to be allowed to visit outlying portions of the Japanese Empire.

The writer was fortunate enough to be attached during his third year to the Headquarters of a Division in Korea and was able to gain a first hand knowledge of that most interesting country and to make journeys along the Yalu river and to the north-east frontier where the boundaries of Korea, Manchuria and Asiatic Russia meet, followed by a tour of the Manchurian battlefields and a journey through Formosa.

During his third year, too, the language officer will probably attend the annual grand manœuvres, a most interesting culmination to his association with the Imperial Japanese Army.

Finally, he will take the Interpretership examination in Tokyo and bid farewell to Japan.

Whatever the future may hold for him, he is not likely to regret the three years which he has spent in that fascinating land; three years of hard work, it is true, unless he is a linguistic genius, but years full of interest:

He will have acquired more than a mere working knowledge of probably the most difficult language in the world, in itself a cause of lasting satisfaction, and will have gained an intimate knowledge of the manners and customs, and, most important of all, of the thought-processes of a most interesting people who have made, and are still making history.

He will have travelled widely in countries which the average soldier seldom has the chance of visiting, and will have acquired a broader outlook on world affairs, and new interests, and will always have with him memories of a great experience.

PART II.

The life of a language officer in China differs in many respects from that of an officer studying in Japan.

Whereas, in Japan, he is living in a country with a settled government which is on terms of equality with other Powers, in China, the foreigner finds himself in a privileged position *vis-a-vis* the inhabitants.

He is protected by extra-territoriality from the vagaries of Chinese law, and the great majority of his fellow-countrymen reside in the foreign concessions, where they live their lives almost entirely out of touch with the people of the country.

The result is that freedom of movement is greatly curtailed, more so since the Revolution and the endless Civil War which has followed it.

Before the Civil War period, a foreigner could travel freely in China, but even then the lack of adequate means of communication made travel in the interior a considerable undertaking.

Since the Civil Wars plunged China into chaos, travel has been even more restricted, and now officers are not permitted to travel in the interior except within strictly circumscribed limits.

The language officer in China is therefore, at present, practically confined to Peking, which is undoubtedly one of the most interesting and fascinating cities of the world. Here, if unmarried, he will live in the British Legation.

Encircled by its old walls, it is still redolent of antiquity and in spite of the irreverent hand of democracy which lies heavily

upon it, it still retains much of the glamour and romance which made it one of the wonders of the world when it was the capital of "The centre of the Universe." A student of history or of art will find a never-failing delight in the magnificent palaces and temples, in the museum now housed in the once-forbidden city, and in roaming through the narrow lanes of the Chinese city.

In two important respects residence in China has an advantage over residence in Japan.

These are the cost of living and facilities for sport.

Although the difference is not so marked as it once was, living in China is cheaper than in Japan.

Again there is wonderful shooting to be had in China, almost for the asking, and anyone can keep ponies and play polo, of a sort, for the China pony is ridiculously cheap.

Although the future of China is uncertain, this very uncertainty makes residence in China particularly interesting to the student of affairs, and he who lives there now cannot but feel that he is assisting at the making of history.

In spite of the taint of ill-digested revolutionary ideas the ordinary Chinaman still retains many of his excellent qualities. The common people are pleasant to deal with and, on the whole, tolerant of the foreigner unless roused to anti-foreign sentiment by those whose business it is.

EXPERIENCES OF ARMY IN INDIA POLO TEAM IN AUSTRALIA, 1928.

(A lecture delivered to the Members of the United Service Institution of India by Colonel T. P. Melvill, D.S.O.).

It is almost impossible to give our experiences in Australia without being egotistical. It is, after all, about ourselves, what we did and what we didn't, that I have to speak. Personally I think there is nothing nicer than to talk about oneself to some very intimate friend or even, friends, but on an occasion of this sort it is a very different matter and when I keep on repeating "I" and "we" I do hope you will put it down to lack of oratorical experience rather than to any deliberate attempt at self eulogy.

Our adventure, if I may call it such, may, in its own very humble sphere, be described as both historical and record breaking. Historical, because it is the first occasion on which a polo team from overseas has ever visited the Commonwealth-record breaking because, to the best of my belief, it is the first and only time in the annals of polo, in which an attempt has ever been made to mount a team *in toto* on strange ponies. Now you polo players realise what this "mounting" means—you know how much you rely on your pony for the enjoyment of the game. When I see a man playing well I do not look at him but watch the pony, because in nine cases out of ten, it is that which is enabling him to hit the ball with such accuracy. Polo would be great fun on donkeys as long as nobody rode a mule. A pony, which suits me, does not necessarily suit you and *vice versa*. In fact what is one man's meat is another man's poison. Consequently you can see for yourselves the difficulties of the New South Wales Polo Association when, in response to their kind invitation they were informed that four officers whose names we gave them, were coming out to play. They had no idea of their weights or their capabilities or horsemanship, and if I had been asked, under similar conditions, to mount four Australians coming to India or to England I should have replied "it is impossible." Nevertheless the New South Wales Association, not only undertook this task but did it sufficiently well to enable the Army side to give their best teams a real good gallop and the fact of their having been able to do so, opens up a whole vista of possibilities for the future. No one imagines or pretends that the best ponies had been lent, but it is interesting to note that at the sale by public auction, at which practi-

cally all the ponies were put up, they fetched almost without exception, far bigger prices than their owners had anticipated and it is quite safe to predict that, if another team goes to Australia, many more players will come forward with ponies than was the case this year. I took it upon myself, in the name of the I. P. A., to invite a team from Australia to pay us a return visit here either with or without their ponies and assured them of a warm welcome.

Before telling you about the actual polo I want to give you a few impressions that we got from our tour. First of all our journey—a tedious business to Colombo especially in the hot weather. From there we reached Australia (Fremantle) in 8½ days but to arrive at Sydney, which was our destination, it took longer than from London to New York—in other words Fremantle is about half-way. Our return tickets from Colombo to Sydney cost £65—which when you consider that if you go all the way by sea, as I did personally on the return journey, it means 34 days on board—you will readily realise it is the cheapest steamship passage in the world to-day. It will cost you nearly as much to live at the Cecil Hotel, Simla, especially if you have a gin and bitters or two before dinner.

The first thing that struck us was the proverbial hospitality of the Australians concerning which one had heard from one's youth up. Believe me, it is a reality and not a myth. When we were in the middle of the Indian Ocean—just past the Cocos Islands, where, as I dare say you know, there is a small Colony of Englishmen, employed by the Eastern Telegraph Company, who are in charge of the Wireless Station there and for whose benefit the P. & O. and Orient Liners, when they happen to pass by during the day time, go in quite close, slow down, and let down a barrel containing fresh meat, vegetables and periodicals. We passed about breakfast time and it was quite thrilling to see a small sailing boat come out in the choppy sea, pick up the barrel and to hear the five occupants give a real good British cheer. On another of the islands, it is still possible to see the remains of the famous Emden, which caused so much havoc to us during the War. Well, we had just passed these Islands, when a marconigram was handed to me from the President of the Polo Club at Perth inviting us to be their guests during our stay at Fremantle. (Perth is nine or ten miles from Fremantle). What we couldn't quite understand was why they asked us how many ladies we were bringing with us,

and it amused me a few nights later, when we were enjoying a capital dinner with them, to explain that it was our custom, and I felt certain that it was equally theirs, never, if it could possibly be avoided, to take "Coals to Newcastle," and the longer we remained in Australia, the more I was convinced that our decision to stick to this old world custom was an eminently sound one! They gave us a great evening at Perth. The same sort of thing happened at Adelaide, where all the leading lights in the sporting world most hospitably took us to lunch at the Club and then on to the races where we saw Lord Somers' English horse "Fourthhand" win the principal race and receive a great ovation from the public (Lord Somers is the Governor of Victoria). Another deputation awaited us at Melbourne where, thanks to them, we saw more of the place in a few hours than most people would do in several days. At Sydney we were met by Mr. Ken Austin, Honorary Secretary, New South Wales Polo Association. This gentleman had organised the whole trip. He had collected the ponies from here, there and everywhere, in his own Blood stock stables, and his help and guidance throughout our stay was absolutely invaluable. A Limousine car was placed at our disposal for the duration of our stay and we were taken to the Union Club which was our Headquarters as the guests of the Polo Association while we were in Australia. The Union Club, Sydney, closely resembles any of our real good London Clubs. We were given a most hearty welcome from the members and made to feel at home at once. Whilst in Sydney we were nearly killed by kindness. Never have we seen such hospitality in our lives. You have to see it to believe it.

What impressed us tremendously was the absolute and unquestioned loyalty of one and all to the Throne—after that all men appear to be equal. It was an education to be at a race meeting at Randwick or at the sheep show or at an International football match, at all of which huge crowds were present, and to see the hats come off when "God save the King" was played on the arrival of the Governor-General. One's chauffeur, the groom who looked after one's ponies, men who had never been to England and who probably never would go there, all spoke of "Home" or the "Old Country."

Again everyone looked so prosperous, one never saw a poorly dressed or ill-fed man. I happened to accompany the Governor-General when he went to greet Kingsford-Smith and Ulm after their historical flight across the Pacific. We saw the "Southern Cross"

land within a hundred yards of us and taxi right up to the Governor-General. As soon as he had shaken hands and congratulated them we drove off in his car through surging masses of people. I never saw a single sullen face—all were smiling and happy. I attributed this to the sun and £4-5-0 a week, the minimum wage of the country. Whether this prosperity is a false one or not I cannot say. The growing of wheat and other industries are there, but it seemed to me that the majority of eggs were in one basket, namely the sheep, and if wool was to drop sixpence per pound it would undoubtedly be a very severe blow to the country.

The lack of servants appeared the one and only drawback. Nearly everyone drove their own car. One groom looked after five ponies and it was amazing to see them ride one and load four on slippery tarmac roads with cars in every direction. We had no accidents. I stayed at a big country house for the Polo Tournament at Goulburn. The following morning when dressing for breakfast I looked out of the window and saw our host's daughter with several halters in her hand going out to catch the ponies which she afterwards groomed and saddled and brought round for us to ride. The sons of the house were washing the cars. Most of the hotels and clubs had waitresses instead of waiters and I must say it is far nicer being waited on by a clean woman than a dirty man. Whoever the member was who chose the waitresses at the Union Club must have been an extraordinary good judge of a woman. Never have I seen such a collection of pretty girls before and they were extraordinarily good too—at waiting I mean. I am certain that life here in India is the worst possible education for anyone contemplating a new career in Australia. You will find no bearers there, not even a khitmatgar.

There is a name with which you can still conjure in Australia and will be able to continue to do so for many years to come. I refer to the man known as the "Soul of Anzac." There is scarcely a town or village which does not have its "Birdwood Avenue" or "Birdwood Parade" and I am quite certain that as far as Australia is concerned Great Britain has never had a better ambassador than our own Field Marshal.

Now as to polo. We hadn't been in Sydney more than an hour before Mr. Ken Austin was showing us the ponies he had collected for us. You can imagine our excitement at seeing for the first time the animals we had come all this long distance to play. They were practi-

cally all genuine ponies, only one being over 14·3 and several smaller. I scarcely noticed a single horse playing in any team during our stay and only wish I could say the same of other people and places. To my mind these enormous horses are spoiling the game. Most of the ponies were just up from grass. This isn't as bad in Australia as elsewhere. The grass is extraordinarily good and cattle ponies are regularly galloped on it, but at the same time they were not in a fit state to compete with ponies fed on oats. We rode them that evening in their own snaffles, saddlery, etc., ours not having yet been unpacked and although they showed no signs of having been schooled according to our ideas, they were nevertheless amenable and went better than one might have imagined. I realised at once, however, that to do any good they must be bitted and we commenced this task the following morning. We had brought with us our own saddles and bits (chiefly Pelhams and double bridles) and although several of them fought a bit at first the majority of them took to it fairly kindly. As time was so short it was imperative to fit ponies to players as soon as possible. I consequently told the team that, whenever they found a pony which was likely to suit them, I would endeavour to let them keep it. We worked hard at this schooling two hours every morning and the same in the afternoon. After the third day we had a cantering knock up with some of the local Sydney players on the polo ground and the ponies acquitted themselves, on the whole, better than I anticipated. In the tea tent after the game a gentleman whom I had met for a few minutes in the club the night before, said to me "did you like that little brown mare you were playing in the last chukker?" I said I thought she was a little gem. He replied "I shall have much pleasure in presenting her to you." I was so taken aback that I am afraid my thanks were very inadequate. I took a lot of trouble afterwards with this little mare. Dollar played her two chukkers in every match and I eventually won with her the light weight polo pony class at the Sydney show, from a very large entry.

We continued these slow practice games every other day and on the next occasion we played, a deputation from Harden, the team which had won the Dudley Cup for the past four seasons, approached me and asked if the team would play in their local tournament the following week, adding as an inducement that they would lend us six good ponies after the tournament. I replied that, much as we would like it, in the present state of the ponies, both in condition and training,

it was absolutely impossible for us to do so at this stage of the proceedings. Next morning a head line appeared in a paper "Army Team refuse to play" and there was a good deal of "chat" on the subject. Personally I am absolutely convinced that had we gone there and galloped our ponies before they were anything like right, we should never have won a single match, but it just shows how careful one has to be when one is in any position of public responsibility. In this connection I would like to emphasize the fact of how important it is to have some senior fellow in charge of any undertaking of this nature. Someone whose word is law, not only on the polo ground but at all times and in all places. A thousand and one conundrums, social and otherwise, kept cropping up with considerable diversity of opinion as to how they should be answered, and unless there is someone to definitely decide, confusion, if not worse, is bound to arise.

After three weeks of intense schooling (remember the ponies had to be started from the very beginning), we went to Goulburn for their tournament, or Carnival as they call it out there, and it was there, for the first time in my life, that I saw two teams playing in a tournament with all eight men riding in snaffles. You can imagine how interested I was watching. They went like smoke and, on the whole, hit surprisingly well, but it was an uncomfortable game to watch and still more uncomfortable, I am sure, to play. Practically no attempt was made to stop, as we understand it. The ponies were pulled round on their forehand with both hands, practically at full speed, almost like a bicycle. To pull them round like this in India, where the footing is not so secure, would, in my opinion, be suicidal. I was surrounded by polo enthusiasts whilst watching this game and they all kept asking me what I thought about the snaffle. I replied that I had played polo for the last 32 years in almost every country in the world, except the Argentine, and had only on two occasions seen ponies played in the snaffle in a tournament and that if the snaffle was the correct thing, then the rest of the polo world were wrong. But I did not feel that they believed me. What did more than anything else to convince them was our second match (we won our first very easily) against Goulburn. Now Goulburn were looked upon as the second best team in Australia. They were composed of the four brothers Ashton. Unfortunately one of the brothers had been injured in a practice match and his place was taken by a Mr. Petit, an older and more experienced player than either of the brothers, who had often

previously played with them and whose inclusion in the team did not, in the minds of the experts, in any way diminish their strength. In the actual game we never looked like getting beaten and started the last chukker four goals to the good. Goulburn scored twice in this chukker, due almost entirely to our team saving their best ponies. Watching the match it was easy to see why we won. Our team were riding with one hand whilst they were using two. Their ponies were fast and wonderfully handy, considering they were in snaffles. Their team rode hard and hit well, but the Army were turning inside of them all the time. At least that is how I read the match.

Then came rain—sheets of it—and bitter cold, so it was decided to play the final at Sydney after the conclusion of the Dudley Cup.

On our return to Sydney we found several people, impressed by our display at Goulburn, willing and anxious to lend us ponies, and these we worked at for a few days, but the time was too short and although we did play two or three of them, I very much doubt if their inclusion did us much good.

We won our first two matches in the Dudley Cup the following week, decisively, and then met the famous Harden team consisting of 3 Brothers Ross and Mr. Maple Brown in the semi-final. For four years they had won this Cup. During this time they have bought every pony, regardless of cost, they considered up to their standard. After their work they train for polo, they go to bed early every night, never going to a dance or social function and are as hard as nails. Mr. Tom Ross, their back, milks a couple of cows every morning before breakfast to keep his wrists supple !!! The betting was 10 to 1 on them. At half time they were leading 4 to 1 their ponies having the legs of ours. It had been by no means a walk over however, and from then onwards we had decidedly the best of a ding-dong struggle. In fact had the game lasted a few minutes longer it is almost certain we should have won. The final bell going with the score 4-3. It was a great performance on the part of the Army team and they received a wonderful ovation from the public. Watching, as I did, the game it was palpable, just as it was in the match against Goulburn, that the reason for our doing well was the simple one that our fellows were riding with one hand and their's with two.

In the final—Harden *versus* Goulburn—the former were leading by 3 goals at the end of the first chukker. At the commencement of the

second chukker Mr. Maple Brown, their best player in my estimation, had a crashing fall and was completely knocked out. His place was taken by his brother, a complete novice, and might just as well not have been on the ground, with the result that Goulburn won after extra time. Had it not been for this accident I am convinced that Harden would have won decisively, for the fifth year in succession. Thus the Goulburn side, whom we had defeated with ease in their local tournament, won this coveted trophy.

Three days later we played the final of the postponed Goulburn tournament against a Victorian team and were most unexpectedly defeated 5—4. It is not good to make excuses but looking on as I was it was quite easy to see what happened. Our ponies straight from grass, as I told you, when we took them over, had been hurried in their preparation. They played well against Harden but got a terrible gruelling in that game from which they had not had time to recover and it was literally painful to watch them struggling against the Victorians. Our players could scarcely get a canter out of them. Nevertheless the Victorians gave a very fine display, in fact, in my opinion, they were as strong as Goulburn. They were Captained by Mr. Winter Irving, a one armed player, who put up a magnificent performance himself.

Thus out of the six tournament matches we played, four were decisive victories and we lost the last two by one goal each.

As a direct result of these games the Australian Polo Club decided to postpone their visit to America which had been definitely fixed for next year and from all I could hear, I am convinced that a large majority of players will take to biting their ponies and systematic schooling forthwith.

I submit that for four young officers from the Army in India to be entirely responsible for these two most momentous polo decisions is an achievement of which they can well be proud.

I was very much impressed with the natural resources, both in men and ponies, at the disposal of the Australians. Men as keen as mustard, hard riders, hard hitters-ponies as good as anything in the world, but both need developing. They have many difficulties. There are no men of leisure out there. They have no army from which they can send four officers and the work go on just as well in their absence. They live many miles apart, their facilities for practice are few and the

grounds at their disposal very indifferent. The ponies play more by the light of nature than anything else. A batch from a station are "tried out". Those that show a natural aptitude are put straight into the game; the others return to grass or are sent to India. If those showing natural aptitude could be bitted and carefully schooled and if some of those young players whom I saw, could be taken in hand and made to keep their places, there is no reason whatever why a team should not be produced, and very shortly too, capable of taking on anybody and everybody.

We went out there to play a series of friendly matches as opposed to an International contest. This word "friendly" we used as our keynote from start to finish. We were an absolutely happy family ourselves, without which sure foundation no success can be attained, be it with a regiment or a polo team, and not only were we happy amongst ourselves but with everyone with whom we came in contact. The team were universally popular and admired, not only for their skill in horsemanship, which was very marked, but also for the simple fact that they were English gentlemen.

With a turn of a coin we might quite easily have been undefeated and have brought back two cups in triumph with us to India; but however nice that might have been, does it really matter much on occasions of this sort, as long as the games are keen and clean and close, as anyone who witnessed them will testify they were, who wins or who are the losers; it will be all the same a hundred years hence. But as I pointed out at a large farewell banquet given by the members of the Union Club a few evenings before we left Sydney, what *did* matter was that we should seize the opportunity to get to know our brothers in Australia, to get to appreciate each other, to get to realise each others difficulties and to make this game we love and played together yet another link in that endless chain which day by day is binding us closer and closer together for the infinite good of the world and of all mankind.

The Colombo Polo Club most sportingly mounted us on our return, and we had a capital afternoon's polo on one of the best grounds I have ever played on in my life.

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|------------------------------|-------------------|
| 1. Mr. C. F. Keightley | .. Inniskillings. |
| 2. Mr. G. E. Prior Palmer | .. 9th Lancers. |
| 3. Mr. P. W. Dollar | .. 4th Hussars. |
| Back. Capt. R. H. Wordsworth | .. 6th Lancers. |
| Capt. C. P. J. Prioleau | .. The Guides. |

EARLY DAYS OF "SHAFORCE."

By

CAPT. J. E. E. PACKARD, M. C.

On Saturday, January 22nd 1927, I was out training my company about three miles from Victoria Barracks, Rawalpindi, when at about 11 o'clock an orderly from battalion headquarters told me I was wanted by the C. O. at once. Whilst riding in I wondered which of my last sins or omissions had been found out. On reaching "the presence" the adjutant murmured "China" in my ear and the colonel told me I was to go with the brigade from India. How soon could I start? Saturday, banks and shops closed, and I had to report at Jhansi as soon as possible. The mail for Delhi and the south left at noon and another train at seven p.m. No, that was a bit too rapid. It would have to be to-morrow. Could I afford to wait till Monday and still be in time? Then I could settle up, pack, and get clear away. But in the end we decided that Sunday night's train would be the latest time that I could leave with safety.

The day was spent in packing, getting money, handing over the company and the mess, etc., etc. There wasn't much time to look round. My wife had to do all the big packing, with the help of the faithful Badruddin, after I left and all our household goods, only just arrived from Home, were pushed back to repose in the Q. M's. store.

My own packing was difficult enough. I had been given no orders regarding the amount or type of kit. I had an idea that it would be fairly cold at first, but hot later in the year, so I decided to take ordinary F. S. kit thick and thin, a blue jumper and camp kit. What about mufti? I had been told that my appointment as Staff Captain, 20th Indian Brigade, was a temporary field service appointment, one of those cryptic terms which may mean much or little. I decided on a dinner jacket, one store suit, a pair of old grey flannel bags and an old tweed coat.

After saying good-bye to my wife, and all the collection who came to see me off on Sunday night, I sat down in the train to try and straighten out my thoughts. At this time the news of the trouble in China had got into the papers, but no one as lowly as a regimental officer in Pindi knew that a brigade was being sent from India at the urgent request of the War Office. There were the usual rumours flying about, and the G. S. O. I., of the district, told me what he knew

in the district office that morning. Brigade headquarters were to embark at Calcutta on the 23rd and I should catch them at Jhansi before they entrained. Was this a war, or what? Troops were coming from England we knew, but I calculated we would be there some time on our own and it would be interesting enough. But war—No. Policemen, brickbats and the usual unpleasantnesses of "duty in aid of the Civil Power."

What were my prospects? Here was I going to do the same old job again, staff captain to an infantry brigade, Indian this time, a little variety. Anyhow I needn't be afraid of being unfamiliar with the job. In November 1916 I had gone to my first 3rd grade staff job, Staff Captain to a brigade in the British Salonica Force. That was nearly 11 years ago. Well, this was an order and no question of "is this officer willing and desirous." There was to be another staff captain to the brigade, a gunner. Therefore, presumably a good many additional troops besides the four infantry battalions. They must have mobilized very quickly as I found out later. At Delhi the next evening, B of the I. A. V. C. got into my carriage and I heard more news from him. Some units were to embark at Bombay, others at Calcutta, and he told me of certain units he knew were going, and that he was going from Bombay.

I reached Jhansi at 6 a.m., on January 25th, and on enquiring from the Station Master about troop trains, was told that the first had left with part of the Gloucesters for Bombay. Another was leaving for Calcutta that night, so I had not missed them. I got a tonga and set out for brigade headquarters where I found a sleepy officer in pyjamas who I afterwards discovered was the educational officer. He could tell me nothing I didn't know except that we were to leave that night. I went back to the hotel for a wash, shave and breakfast and returned to brigade headquarters about nine. Here I met dozens of strange faces and finally the brigade commander and the brigade major. After reading through various files I completed the morning's work by being medically examined in company with my brother staff captain. He then took me off to the Gunner's Mess for lunch and later we went to telegraph long wires to our respective wives. Then we collected some mess stores for the journey and got down to the station in time to see the brigade headquarter horses entrained. They had not been allotted and had come straight from 16th Cavalry and I picked on "White

Blaze" a good looking chestnut waler and another fairly decent country-bred for myself.

Of course by this time most of the mobilization work had been done by the regular Staff Captain of the Jhansi Brigade who was not to come with us. He must have had plenty of work but was well rewarded as after we left he became Brigade Major of the remaining troops left in the area.

We entrained at 6 that evening and the journey to Calcutta was much like any other journey on a troop train in India. We picked up our Signal Section from Jubbulpore that night and next morning the 26th we met the officers. I spent most of the journey reading through mobilization files and various other orders. We were railed round to the Kidderpore Docks and spent from 11 till 6 embarking the troops and stores on to H. T. Takliwa, a B. I. ship. The 2nd D. L. I. who were to come with us had arrived at the docks just before us from Sialkot. I spent a lot of time taking over and checking as best I could various stores consigned to brigade headquarters, gas masks, medical stores, motor cycles, etc., etc. By 6 we were all on board but I had no time to go and see any of my friends in Calcutta. J. F. came down to see me off just before we sailed, and I told her my wife was arriving next morning, but I feared would be too late to see us. She had packed up everything in Pindi and was on her way to join her sister in Rangoon. During the afternoon long cipher wires from War Office and A. H. Q., India had kept coming in and the B. I. O. had been quite unable to keep pace, with them. So after dinner he, R, J, and I, sat down and finished them off. It took us till about three a.m. to complete them.

We sailed down the Hooghly at daylight next morning, January 28th, and our first port of call was Singapore. During the voyage we had several more ciphers by wireless and it was soon obvious that we should have to get an officer to help S. in his work, so that he could have more time for his real "I" work. It is evident that we should in peace-time train more officers in this important work of codes and cyphers. In fact, it would be preferable to make this a part of all officers training. S. was busy working up lectures for us on China and the present situation. The Colonel Commandant had decided that I was to be Staff Captain "Q", R, J, and I were busy enough on board. Firstly, we had to prepare brigade standing orders for war, modelled on the peace-time orders and adapted to a formation such as ours.

Although these orders were never of great value after the arrival in Shanghai their preparation certainly helped us to get to grips with many problems. Secondly, we had to organize brigade headquarters so that it could function smoothly and correctly in war. Brigade office orders were written and the office organised so that it could function at once and continue to do so immediately after disembarkation. In this work we came up against one outstanding difficulty, namely, the lack of an adequate War Establishment for a Brigade Headquarters in India. The personnel allowed were in every case insufficient. We had no senior N. C. O. responsible for pay, discipline, drawing rations and general interior economy of the headquarters. All experience goes to show that a senior N. C. O. certainly not below the rank of sergeant, is essential. We tried for some time to carry on with lance-corporals and corporals but unless one gets the most exceptional young N. C. O., he really has not sufficient experience or power to carry out these responsible duties. Then extra clerks, office orderlies and runners were required. All these had to be obtained temporarily from the D. L. I. and we arranged that the Gloucesters, our other British battalion, would take over some of these duties after arrival in Shanghai. Also the Indian battalions would be called on where possible.

To hark back a little, I must explain that the brigade were out on brigade training some 20 miles from Jhansi when the order came on the 21st January to mobilize. They were practicing a rear-guard scheme, and after situation 'X' was issued and the next line of retirement ordered to be taken up situation 'Y' followed which read something as follows: "Units close. Return to Jhansi. Mobilize." During mobilization all went fairly smoothly except for one or two things. Firstly, great difficulty was experienced in getting followers to proceed overseas. Gloucesters, Brigade Headquarters and the Bakery and Butchery Sections had the most difficulty in this respect; the latter were only able to mobilize with skeleton personnel, one without any Indian personnel and one with only one herdsman. Brigade headquarters had to take batman from British battalions in lieu of bearers and borrow some sowars from the 16th Cavalry in lieu of syces. Such followers as were obtained were naturally a very bad class of men. A syce was given to me who had probably been a ghari driver at the most prosperous time of his life, he was eventually appointed by the

Brigade Transport Officer as grass cutter and chief bottle washer to the brigade headquarters grooms, and I had to get another soldier groom, but nevertheless had to pay this rascal Rs. 22 a month and give him warm clothing. Secondly, the question of officers' chargers was most unsatisfactory. 60 per cent. of the peace-time chargers were found unfit for service and could not be purchased by Government. There is no doubt that the only sound and satisfactory method is for government to supply officers with the required number of chargers in peace-time and for the additional to be made up from remount depôts or cavalry units on mobilization. Thirdly, nearly all the machine guns and Lewis guns in charge of units had to be replaced. Moreover, brigade headquarters and the Gloucesters entrained before all the equipment from arsenal had been received. This equipment had to be collected at the port of embarkation where there was no time for proper checking.

We arrived at Singapore on February 2nd but no one went ashore except the Brigade Commander and Brigade Major, who paid a brief visit to the Headquarters, Malaya Command. We also sent some mail off by the W. O. i/c F. P. O. The ship spent the day taking in oil and we sailed again that evening. The Takliwa was a fast ship and we were making a good 15 knots and soon slipped past a group of British Cruisers which had been ordered east. They had come out at full speed as far as Singapore but then our economical Admiralty had ordered economical speed. Later on, we heard of their wrath at being passed by a common troopship.

Meanwhile, there was still plenty of work for me to do on board. The supply situation had not been made quite clear and C., our indefatigable D. A. D. S. and T., and I had to try and sort this and transport matters out. We also had I., D. A. D. O. S., and O'M., D. A. D. M. S., on board who were both invaluable in helping to clear up any difficulties in their respective branches of the service.

When we reached Hong Kong on February 7th, there seemed to be quite a possibility that we might disembark there, and while the Cabinet at Home were deciding whether we should go on or not, we were delayed two valuable days making preparations to disembark there and to find accommodation in Hong Kong or Kowloon. But eventually orders came for us to proceed to Shanghai and we sailed at 5 p.m. on the evening of 9th.

During our stay at Hong Kong, we had been able to pick up some warm clothing for the Indian troops and followers from the ordnance depôt and by local purchase. These were badly needed and the brigade commander wisely decided to make an extra issue, owing to the severe climatic conditions we knew we should experience on arrival in Shanghai. It had already become very cold and the day we entered Hong Kong there was one of the coldest winds I can remember out of England.

We had also been able to pick up a good deal of news regarding the present situation in Shanghai and in China generally. No serious trouble had yet broken out in Shanghai but things were looking unpleasant. The 5/2nd Punjabis had already been sent up there from Hong Kong and the Shanghai Municipal Council had begun to put up barbed wire and defences around the settlement. We gathered quite rightly as it turned out, that one of our main difficulties was going to be accommodation. We had been sent a schedule of buildings and camping space available in Shanghai. Although there appeared on paper to be sufficient for our immediate needs they were by no means suited to the brigade commander's conception of the tactical situation. We wired back certain suggested modifications to their scheme, and trusted that the only Staff Officer, B. A. G. III, from Hong Kong, who had been sent up there, would see us through. It was obvious from the first that the space allotted to us for ordnance stores and supplies was totally inadequate even for our own brigade and attached troops. Moreover the godowns allotted were on the wharf side leaving no transit area, and this would inevitably lead to chaos and confusion on the docks as was so often experienced during the great war. Also this system is contrary to all principles laid down in the Manual of Movements, War. I asked the brigade commander to fight this point as much as possible after our arrival.

We arrived off the Wusung Forts at daylight on February 12th, and berthed at the Old Ningpo Wharf about 9-30 a.m. The Brigade Commander and the Brigade Major went off at once to confer with the Commanding-in-Chief, Admiral Tyrwhitt and the Consul General, Sir Sydney Barton, on H. M. S. Hawkins, the British Flagship. At Wusung we had passed H. T. Vasna with the Gloucesters on board. They had embarked at Bombay before us and reached Hong Kong a day after us.

At about 2 p.m. the troops were sent for exercise ashore and during the afternoon the animals were off-loaded. They had been at sea for 17 days with little chance of exercise and it was essential to get them off and gently exercised as soon as possible.

We had held a brief billeting conference on the Takliwa about noon, and B had arranged for the billeting committee to take the brigade commander and staff round the various proposed sites for huts and camping grounds, in the afternoon. At about 2-30 p.m., Colonel L., an ex R. E. Officer, the President of the Billeting Committee, and Mr. S., his assistant, came on board and took us off in cars. The latter caused much amusement amongst the troops as he was dressed in a pink coat and bowler hat ready for one of the weekly paper hunts. We felt sure that we had come to a real war when we saw him. The Brigade Major went off for a rapid reconnaissance of the proposed line of defence of the settlement.

An inspection of the billeting areas only confirmed our suspicion that accommodation for the troops was going to be a very serious problem. The brightest spots were the two waterworks, the eastern in the Yangtszepoo Road, and the western in Kiaochow Road, and the Race Club buildings. In part of the latter 5/2nd Punjabis had already made themselves very comfortable. We could just squeeze one British battalion into the remaining Race Club buildings and the other in Kiaochow Road waterworks. Both these places were far from ready but work was going on at the pace that only Chinese carpenters can maintain. The mat-sheds were mostly double thickness and fairly waterproof. They were provided with stoves and electric light and they had taken much trouble in trying to provide the necessary washing and sanitary arrangements. We found a small place for our signal section, F. P. O., and part of brigade headquarters and the animals. The latter were always a difficulty; no civilian in a town such as Shanghai wants mules in his back garden.

Here I might say that of all large towns I have seen I think Shanghai is one of the most thickly built over and has fewer open spaces. We had instructions that we were not to go beyond the limits of the International Settlement and this order had to be strictly adhered to as far as billeting was concerned, at any rate for the present. During the trip round we saw what open spaces there were and it was evident that the Billeting Committee had done all they could to persuade the

property owners to allow their land to be built on or their buildings used for the accommodation of troops. But they had not always met with success. A lot of the property was not British owned and in certain cases even the British owners had not realized that there was a large force of troops on the way to protect their interests.

So far, we could say on the 12th that we had partly completed billets for the two British battalions, brigade headquarters and the signal section. The 5/2nd Punjabis, which battalion did not belong to our brigade, and would, it seemed probable, return to its own command at Hong Kong as soon as we could spare it, occupied billets for another battalion. We had seen open spaces on which mat-sheds and wooden huts were being erected which would accommodate, when they were ready, the remainder of the contingent from India. But, in the mean time, the H. T. Sirdhana with our two Indian battalions on board was rapidly approaching and was due in Shanghai on the 15th. In addition to this, and to make matters worse, we had totally inadequate accommodation for the supply dépôt and the ordnance dépôt. We had part of a small factory for the Indian hospital and some rather dilapidated buildings in Hadoon Gardens for the British hospital. That night I spent some sleepless hours, wondering what the Base Commandant would say on his arrival, when he heard of these arrangements, and how we could possibly persuade the civil people to give us more. In the morning I again told the Brigade Commander of my fears in this respect and asked him to worry the British Consul General for more space everywhere. I believe he did this every time he met him. The poor man, had, no doubt, worries enough but I now felt that the situation was extremely serious.

The accommodation which we had seen for the British battalions was far from complete on the 12th, and it was not until the 14th that they could disembark and march through the settlement to their billets. The 5/2nd Punjabis, who up to this time were under the orders of Colonel G., Commanding S. V. C., came under the orders of our brigade, and orders were received from the War Office on the night of 12/13th, that they were to return to Hong Kong on relief by the 2nd Suffolk Regiment, who had been ordered to embark for Shanghai.

On the 13th February, tactical and administrative reconnaissances were carried out, and it was found that billets were not ready for occupation; often being deficient of important details such as latrines, washing arrangements, etc.

Before our arrival I had realized that we should try to form some sort of disembarkation staff to deal with the numerous ships and units due to arrive shortly, but all officers with battalions were required for reconnaissance duties, which incidentally, had to be done in plain clothes if outside the settlement. Also there were no officers with any experience of this work nor any clerical staff to assist them. Therefore the duty had to be done by S. C. "Q", "in addition to his other duties and without additional emoluments."

Brigade headquarters opened at the Chartered Bank Building at 12 noon on the 14th, and the staff of the bank did all they could help us get settled in. We were given a large room which had to be divided off into offices, clerk's room, signal office and living quarters for the personnel. Consequently, our work had to be done for some days to the tune of the hammers of the Chinese carpenters erecting partitions, etc. Telephoning was a little difficult and trying to the temper.

During this day D. A. D. S. T. made arrangements with Taylors Garage and the Shanghai Tug and Lighter Company, (Mardan's) for the transport of baggage and the daily drawing of supplies and also for the hire of cars for staff and reconnaissance purposes. The representatives of both firms were most helpful and worked hard for us. At this time we had no transport except the 1st Line Transport of Brigade Headquarters, Signals and the D. L. I. and these animals were naturally not fit for hard work after 17 days at sea. Moreover, the only transport suitable to a town such as Shanghai is M. T., of which we had none at that time. Arrangements were made with the Tug and Lighter Company also for the supply of lorries for the tactical movement of troops if and when necessary.

We had been promised that the accommodation for the whole brigade would be ready for occupation by the 14th but this proved to be far too optimistic an estimate. Chinese carpenters and their coolies work wonders while the weather is fine, but they down tools when the rain starts, as we found out to our cost, for we had a great many wet days in February and March.

On the 14th, the Gloucesters and D. L. I. disembarked and marched from old Ningpo Wharf *via* the Bund and Nanking Road, the former to their huts at the Waterworks West, and the latter to the Race Course Buildings. The Gloucesters who had had permission to

bring their band and Colours marched with fixed bayonets and Colours flying, and the D. L. I. were headed by the Band of the Royal Marines. The salute was taken by the Commander-in-Chief on the Bund. The civil population including Chinese were duly impressed. But in the local Chinese Press the following day there were some amusing comments. Why did the soldiers carry their packs and not have coolies to carry them for them? And why, as it was such a wet day, did they not have umbrellas?

On the 15th, reconnaissances and conferences continued, and in the afternoon, the two Indian battalions 4/1st and 3/14th Punjabis arrived in H. T. Sirdhana and docked. They were unable to disembark for several days as their billets were not ready for occupation and there were no suitable open spaces where tents could be pitched. On the 17th, they also marched through the Settlement with their Colours, and the Commander-in-Chief took the salute, but they were still unable to disembark as their billets were incomplete in many details. Latrines had all been made of British pattern originally and the new ones for Indian Troops were not ready. Cookhouses were also wrongly designed for Indian troops. Accommodation generally was very cramped in the hutments and such things as baths, dining huts, canteens and I. O.'s and sergeants' messes in many cases could not be provided for at first. Owing to the shortage of space, huts were built only four feet apart in places.

On the evening of the 17th, the Transport Sirdhana with the two Indian battalions on board, had to be moved from the wharf to a buoy in the stream owing to the arrival of a P. & O. mail steamer. At 2 p.m., on the 17th, the H. T. Rohna from Bombay arrived with one section 16th Medium Battery, 10th Field Company S. and M., 33 Field Ambulance 2 troops, 18 D. T. T. Company, 2 sections of No. 3 B. G. H., and 3 sections of No. 1 I. G. H. and other details. As no wharf was available, the ship had to be moored in the stream and disembarkation commenced by lighter.

On the 18th, a general strike began and by the following day 125,000 workmen, including millworkers of British and Japanese mills, Chinese postal employees, tramway and bus employees and many dock coolies were out. There was a general feeling of tension among the foreigners in Shanghai. The strike was a demonstration in favour of the Nationalist cause, was anti-northern in character, and

was found, contrary to expectation, not to be anti-British. But the Labour Union seemed to have an amazing hold over all workers. After consultation with the Consul General and the Civic authorities, it was considered advisable to have as large a force as possible available for immediate action. At 2 p.m., on the 19th, the 4/1st Punjabis were ordered to disembark, as soon as the ship could be brought alongside the wharf, and march to their billets at the waterworks east in the pouring rain. But rain had a salutary effect on the spirits of agitators and demonstrators.

On the 20th, the general situation was easier, although the Signals billet was stoned by a crowd who were finally dispersed by a platoon of the 4/1st P. R. Also the rear of the 3/14th Punjabis was stoned while route marching. The crowd cleared abruptly when the battalion halted and fixed bayonets. By this day a berth was found alongside for the Rohna and disembarkation of animals, guns and vehicles commenced.

By the 21st, Yangtsepoo Camp, which had been greatly delayed by the rain, was ready for the 3/14th P. R. who were at last able to disembark. On this date, also, the Vasna arrived from Hong Kong with the Suffolks, who disembarked on the following day and moved to the racecourse which were vacated the same time by the 5/2nd P. R. The latter battalion embarked on the Vasna to return to Hong Kong.

On the evening of the 22nd, a conference was being held at Brigade Headquarters in what, later on, became known as the "Flap Room" at the Palace Hotel. Towards the end of the conference, which had become rather heated, the telephone bell rang and being nearest to it I picked up the receiver. An excited gentleman at the other end was saying "Shells are falling in my garden." I asked him who he was and where he was speaking from and also to repeat his message. "I am Mr....and live at No. so and so, Avenue Foch, I tell you shells are falling in my garden. There is a gun in action very close." I repeated some of this to him to make sure I heard him correctly whereupon everyone pricked up their ears, maps were flung on the floor, and the conference eagerly waited for more. I put the gentleman on to the B. M., and later we got the report confirmed by the police; he also told us that crowds had broken through the barrier of the French Concession and were moving on the International Settlement.

This ended the conference abruptly and C. O.'s were ordered back to their units which were ordered to stand by. Men on pass were recalled by bugle and the barriers along Avenue Edward VII, between the French and International Settlements, were manned by the police. It was discovered later that the shelling had been done by a Chinese warship anchored in the river. She had recently turned over to the Cantonese and meant to try and hit the Kiangwan Arsenal. They had laid their gun and then waited an hour or so before firing, during which time the ship had swung round with the tide. They only missed the Arsenal by five or six miles which perhaps is not bad shooting for Chinese.

One of these shells, a dud, fell in the billets of No. 3 B. G. Hospital in Hadoon Gardens much to the delight of the O. C., who had already complained officially that the situation of his billet was tactically unsound. I myself wondered if we had any billets which could be called tactically, or in any other respect, sound.

We heard later that night from the police that mobs of students and armed soldiers were moving on the settlement from the north, and it was decided, therefore, to occupy that part of the defensive line opposite Chapei. 4/1st Punjabis moved into that sector during the night. Nothing much occurred that night, however, and the battalion moved back to billets the next morning, the 23rd. But this time the strike situation too had become much easier.

On this day, 12th Pack Battery arrived on H. T. Bankura, were disembarked the same day, and billeted in Yangtzepoo Camp. Ammunition from the Rohna and other transports had been off-loaded on to lighters and taken by water to Yangtszepoo Camp, just outside which an ammunition dump was formed. Coolie labour had to be largely employed in handling the ammunition and work was delayed as lighters could only get alongside at Yangtszepoo at high tide. The ammunition had to be placed on raised platforms as the ground was low lying and very liable to floods.

On the 24th, reports were received that Sun's Troops had been defeated, and Shantung (Northern) troops were approaching Shanghai from the direction of Nanking. The British Consul General and Commissioner General of the Shanghai Municipality considered the situation to be very serious and it was decided to occupy the sectors on the north and west of the settlement early on the 25th. Owing

to the fact that there was so much British property outside the northern and western boundaries of the settlement, and also that no satisfactory line could be found near the settlement boundary in those regions; the land being so built over, it was found essential to hold a line in Chinese territory along the Soochow Creek thence to Jessfield Railway Bridge—along the railway—Fawah Road to the French Settlement Boundary. A line still further west would have been preferable but we had insufficient troops at our disposal.

Two British battalions the Suffolks and D. L. I. were retained in reserve, but no troops could be spared for the north-eastern and eastern sectors. By noon, the 25th, all troops were in position and rain was falling in torrents. An Italian Naval Landing Force had occupied a part of the north-east sector but information was received that the Japanese would not land their forces at present. The strike was still on but workers were beginning to return in large numbers.

On the 25th, and 26th, the 3/14th Punjabis had great difficulty in persuading the Japanese mill-owners in their sector to give any shelter to troops; who were by now soaked to the skin, although they had previously promised to do so. It was open to doubt whether they objected on the grounds that they might want the billets for their own troops, or because of the fact that we had sent Indian troops to this sector.

At 8-30 p.m., on the 26th, the *Megantic* arrived with General Duncan, G. O. C., Shaforce and part of his Staff, and also, the 2nd Borders and Beds and Herts. Unfortunately for me, there were no 'A' or 'Q' Staff Officers on board, but the M. L. O. and A. D. S. and T., were there. I shocked the former by the brevity of my previous disembarkation orders, but got him to disembark himself and the rest of the troops on the *Megantic*, and promised him I would try and find him an office the next day. The A. D. S. and T., plied me with questions until nearly midnight, during which time, the G. O. C., and our Colonel-Commandant were conferring on H. M. S. Hawkins. He very soon got busy the next day, and I, and I know C, the D. A. D. S. T., too, felt a good bit happier when he told us he would support all we had done.

The G. O. C. inspected the line the next day. I accompanied two very angry C. O.'s to view their proposed billets in Jessfield Park. Neither group of huts were really ready for occupation and I remember

one C. O. saying "He'd be damned if he would put his battalion in a—paddy field." However, it was either that, or Yangtszepoo Camp, which was also not ready. In the end, H. Q. and 2 companies Beds and Herts disembarked on the 29th, and moved into Jessfield Park, and H. Qs. and 2 companies Borders, to Yangtszepoo Camp.

On this day, the Minnesota arrived with 12th Royal Marine Battalion on board and, what was of more importance to me, Colonel M, the Base Commandant and his D. A. Q. M. G. We expected several 'explosions' to occur soon after his landing but instead he was most helpful at once. Meanwhile, we had done our best to cope with the situation and find billets for all the units which kept pouring in. Force headquarters were temporarily, though inadequately housed, and officers pushed into the Astor House and Palace Hotels, and anywhere else we could find.

Colonel M. had hoped to arrive ahead of us, as it was obviously essential that a Senior Administrative Staff Officer should reach Shanghai ahead of the first troops, to settle questions of policy which were to involve the War Office in heavy expense. Under the circumstances it should have been known by the War Office that he could not have possibly arrived before the brigade from India, and it seems that some Senior Staff Officer should have been ordered to Shanghai from India or Hong Kong so as to arrive, at any rate, not later than our own Brigade Headquarters. Had they even thought of sending him *via* Canada he would have been in Shanghai at least a week earlier. Or why not by air for part of the route?

On March 1st, S, our B. I. O., left us to go to Force Headquarters, and soon after this, he went up to Nanking where he became involved in the evacuation from the British Consulate and practically saved the Consul's life. He was wounded himself in the neck and arm and finally returned to Shanghai as a stretcher case in H. M. S. Emerald.

On the 2nd March, the rest of the 18 D. T. T. Company and 16th Medium Battery arrived on H. T. Rajula. About this time, Force Headquarters were beginning to function and one day we were informed that they proposed to hold a promotion examination on the 23rd March. All units from India having mobilized, officers had left personal books behind and had had little opportunity to work for the examination. By this time, our cipher officers had increased to 4 and

we had to employ anti-gas officers and spare medical officers for this duty. They were moved to Force Headquarters on the 2nd March. We managed gradually to find officers for such duties as camp commandants, A. M. L. O.'s, etc., and the 12th Royal Marine Battalion were most useful in this connection. They had come out with over 30 officers and a 1,000 men.

On 6th March, the Suffolks had orders to embark next day for Hong Kong, and moved their baggage to the docks. They were travelling round complete with full peace-time baggage, mess plate, etc. These orders were cancelled at midnight. Their transport had come up from Hong Kong a few days previously and had already been sent back on the same ship. They had still one more journey on that ship back to Shanghai.

About this time other units arrived in Shanghai, including the Coldstream Guards, 5th A. C. Company, Force Signals, 14th Brigade Headquarters and Signals. The latter brigade we housed temporarily in our office, but from now onwards our gradual but inevitable move eastwards to the slums of Yangtsepoo commenced. The Guards took over our Gloucesters billets, the latter moving into some temporary places wherever they could find an empty spot in the North Czechuen Road District. We began to feel that our day was over. The 'Underdog' doesn't have much fun when the 'Topdog' arrives on the scene.

About the middle of March we had our busiest time in the brigade office. In addition to our own units from India, which numbered 24, we had to administer every new unit as it disembarked until either Force Headquarters or the Brigade Headquarters concerned were ready to function. At times as many as 60 copies of Brigade Routine Orders were being issued daily. Consequently the strain on officers, clerks and the Brigade Signal Section was very heavy. One was often in office up to midnight.

On the 19th, 4,000 Chinese soldiers were reported to be at the Kiangwan Racecourse and the Cantonese were reported to be moving on Shanghai. On the 21st, a State of Emergency was declared by the S. M. C., and the S. V. C., (Volunteers) were called up. All barriers were closed and sectors held. Northerners were relaxing their control in the city and gunmen were plentiful everywhere. On this day Northern and Southern Troops were reported by the D. L. I.

to be fighting in the vicinity of the North Station and crowds were collecting in the back areas.

At this time our orders from Force Headquarters as to when fire should be opened, if at all, were very unsatisfactory. The G. O. C. himself emphasised that fire was only to be used as a last resource. It seems obvious that in such circumstances one must leave the actual decision to open fire to the officer on the spot.

Seventy White Russians, believed to be the crew of an armoured train of the Northerners, left the North Railway Station and asked permission to enter the settlement for safety. If permission had not been granted they would undoubtedly have been murdered to a man by the Southerners. One section of armoured cars, who had been sent up to Hongkew Park area, were heavily fired on by machine guns, near Darok Road. One B. O. and 3 B. O. R.'s and 1 I. O. R. of the 4/1st Punjabis were wounded. The fire came from houses in the vicinity.

On the next day the 22nd, these conditions continued. Two posts of the D. L. I. in North Honan Road and Range Road were fired on and the fire returned. Crowds collected in front of the northern sector barriers and also in Chapei. A general strike was again declared. Two more posts of the D. L. I. were rushed in the afternoon by armed soldiers and civilians, and our men opened fire. At the same time mobs broke through alley ways along Range Road. After a certain amount of confused street fighting all those who had broken through were either killed or captured. Altogether, 650 prisoners were rounded up by the D. L. I., with the assistance of one company of the Gloucesters and a party of Force Signals, who were billeted further down the North Czechuen Road. The official casualties as reported for this action were :—British 2 other ranks wounded, Chinese thirty-one killed and two wounded.

On the 21st, a company of the 4/1st Punjabis, when moving up of the Hongkew Park area by lorry, had been fired on by gunmen and one I. O. R. killed and one wounded. The fire here again came from houses and it was very difficult to retaliate. Congratulatory messages to the D. L. I. and 4/1st Punjabis were sent by the G. O. C.

By this date the Japanese and U. S. Marines had landed. The former took over some posts in the Hongkew Park area and the latter manned internal security vulnerable points. About this time we

were struggling to keep under our own hands the tactical lorries afore-mentioned. But Force Headquarters ruled that they were to be maintained in a central pool controlled by them. Centralised control in this case seemed a mistake, as the value of the lorries was entirely lost if they were not on the spot to take troops to a scene of action at very short notice. By the 24th, the situation became quieter and the general strike was called off. Rain, as usual, had damped their ardour. The curfew was enforced from 10 p.m. until 4 a.m.

Towards the end of the month, the situation became gradually much easier but the troops were still hard at work improving defences, particularly in the northern sector. Our own engineers, 10th Field Company Sappers and Miners, did great work all this time. The 13th Brigade arrived up from Hong Kong and we continued our slipping motion into the mud of Yangtszepoo.

During this month, orders were received for our brigade to revert to a peace basis. This led to numerous anomalies and difficulties and many financial questions arose. There was much weeping, wailing and gnashing of teeth. Part of the 18th D. T. T. Company were sent back to Hong Kong under the O. C., Major L. It was proposed to send them back to India as this form of transport was entirely unsuited to conditions in Shanghai. At the same time we sent back a large number of followers who were also useless here. By this time, 12 M. T. Company had arrived. We retained five troops of 18 D. T. T. Company in Shanghai, which were just sufficient for certain definite operations which had been proposed. These operations were designed to push out towards Wusung, Kiangwan and Hungjao. This would shew that we could impose our will on Northerners or Southerners, and at the same time obtain more elbow room for ourselves for camps, etc. This would have improved conditions in the force and especially the health of the troops by one hundred per cent.

The local sanitation, of the eastern district particularly, was deplorable and caused the medical authorities much uneasiness. The Chinaman has no idea of sanitation and it seemed that the local civil authorities were powerless to check their most disgusting habits.

Fortunately the weather was still cold, but we expected serious sickness in the hot weather if matters could not be improved.

From the first arrival of the Indian troops, the Red Organisation at Hankow tried every means in their power to spread sedition among

them by pamphlets and personal appeals. The notorious Daswanda Singh came to Shanghai in March with many other Red Agents. If a further account of their activities is desired I would recommend anyone to read "China in the grip of the Reds" by Captain Eugene Pick, a Cossack, who at one time himself was employed by Borodin.

By the end of April, the situation in and around Shanghai had much improved and May 1st (May-day) and May 30th, the anniversary of the Nanking Road shooting in 1925, passed off quietly; although on those dates barriers were all manned again as we expected trouble. There were a few demonstrations and meetings in the Chinese city and at other places outside the settlement but nothing more.

Early in April, our Brigade Headquarters had left the Palace Hotel and were established in the slums at 24 Kungping Road. The accommodation question was still far from satisfactory by the end of April, and troops were living under very crowded and congested conditions especially at Yangtszepoo Camp. This camp had eventually to be completely re-built with a stronger and better ventilated type of huts fitted with lined roofs and walls, as protection against the heat, and raised from the ground. All huts for British troops were eventually fitted similarly and permanent latrines and cookhouses made.

The question of summer accommodation had now to be carefully gone into, and it was decided to concentrate the forward companies of both the Indian battalions in company camps of E. P. tents, situated as centrally as possible in their respective sectors. Yangtszepoo Camp had to be thinned out and completely re-organised, and instead of accommodating nearly 3,000 troops and 1,000 animals, as it had done at one period in March, it was re-designed for Headquarters and two companies of a British battalion, headquarters and two companies of an Indian battalion, the 16th Medium Battery and the ammunition depôt. Consequently many new camps and billets had to be found somewhere in the brigade area for the surplus. It was decided to concentrate all the transport in one hutted camp at Tongshan Road.

The weather did not begin to get really warm until the end of May, the latter and June, were very pleasant months. In July and August humidity increased and everyone soon realized that Shanghai had really a hot weather. Leave commenced in July and a good many officers were able to get away to Wei-Hai-Wei, Tsientsin or

Japan for short periods. The Middlesex were moved up to Wei-Hai-Wei, where a convalescent camp was also started, and the Borders were moved to Tsientsin.

From May, onwards, the conditions in the force became similar to a normal peace-time garrison. The defensive line was only patrolled to prevent Chinese stealing wood, wire or sandbags from the defensive posts and barriers. But, at the same time, one felt restricted in Shanghai, as one could not go beyond certain limits into Chinese territory, and one was confined to a definite area and therefore restricted to a certain limited form of amusement. At the same time very little military training could be done. All the clubs had been very hospitable to us and there certainly was a good variety of games to suit all tastes. By May, in certain cases, officers' wives had arrived in Shanghai, although they were not officially recognised, except by the paymonger for the purposes of cutting one's separation allowance. Many other pay grouses arose also, but this as is well known is one of the privileges of every soldier.

RESPONSIBILITY.

BY "DAFYDD."

It is considered that, for the Army, where decision is so important and where men of decision are so much in demand as leaders, a discussion of responsibility would not be amiss.

My dictionary gives 'liability to answer or pay' as the meaning of responsibility. That will do as a starting point, but I propose to go farther than that.

For the soldier, responsibility should include not only the liability to answer for his action but also a willingness and a desire to accept the results of his actions; coupled with this, should be initiative, that is to say, a knowledge of what to do in emergencies and the courage to translate such knowledge into correct action.

Most soldiers have ideas for action in the numerous contingencies which may arise. The higher ranks acquire ideas from experience and study; the junior officers and N. C. O's. are learning, and gradually they too acquire experience; the rank and file have their trade driven into them from the moment they join, on parade and in the school-room. I think it may safely be said that in ninety-nine cases out of a hundred the correct action to meet an emergency would be chosen, so long as the chooser was merely taking an academic interest in the problem. The rub comes when the chooser, himself, has to abide by the consequences of his action. So long as it is merely a case of "What should "A" do?"...with not even examination results depending on the decision, the answer, bold and probably correct, will almost always be forthcoming. But, when once the element of personal responsibility is present, problems immediately assume different complexion. Possibilities of failure, with resultant personal censure, begin to appal. It is then that the man of decision, the leader, strong and willing to accept responsibility, stands out in strong relief from his weaker brethren.

Petty instances of the shirking of responsibility are innumerable and known to all and students of military history can remember many of the classic instances where an acceptance of responsibility would have made all the difference in the world.

Nelson at Copenhagen is a brilliant example of a commander who was always ready to accept responsibility.

Responsibility, then, stands out as an essential quality in the successful leader. In some it is born : in others it has to be inculcated. The lucky ones only need polish. How, though, is it to be inculcated in the others ? A discussion of this problem should be of interest.

The acceptance of responsibility, like every other part of soldier's training, requires practice. We spend hours on stiff drill, weapon-training and field work ; but how much time do we deliberately devote to the cultivation of the moral side of command (the basis of which, I maintain, is responsibility) ?

Several regiments will claim that they *do* give their junior leaders a run for their money ; of these units, do all go far enough ?

In many cases the lifting of control merely means that on parades, instead of controlling everything himself, the officer or senior non-commissioned officer allows his subordinates to " carry on " with their various commands, while he prowls round—be it in a helpful spirit or with a coldly critical eye (often not unaccompanied by blistering commentary). In the one case, the junior is only too prone continually to turn for help ; in the other, initiative is generally frozen by the terror of censure or worse. This is particularly the case in the Indian Army.

Of course many will immediately disclaim all such tendencies in themselves. I put it to them that they know of only too many doubtful cases in those around them.

Supervision and strict control are undoubtedly necessary at various stages ; that is not denied : but it is of beyond those stages that I write. How often do company commanders hand their company over to the subordinate they want to exercise and leave him to his own devices ? Who has seen a platoon commander deliberately absent himself from parade in order to give his second-in-command a clear morning entirely free from supervision and embarrassment ? It does not need much imagination to conjure up the view of some who found their platoon commanders thus absenting themselves from parades. (The obvious dangers of too much absence and of occupation during absence do not need much countering). I can even conjure up a battalion exercise in full swing without a single officer on parade. A few such exercises would do the Indian Army, in particular, a tremendous amount of good.

During the last training season, which I completed at an establishment where we turn out some hundreds of officers a year, I was sitting under a rock having a quiet discussion with my runner. My platoon was out of sight in a cup in the hills just over the shoulder.

Just then the General rode up and asked where my platoon was. I explained, so the General dismounted and sat down too.

In ten minutes' time the platoon appeared and completed their little piece. One mistake.

The commander came up for comments, got them, returned to the platoon and repeated the performance, this time absolutely correct.

The reader may think this a very ordinary procedure and just as it should be. Yet I venture to contrast it with very similar circumstances, not a hundred miles from Jandola.

In that case a peppery senior (since gone) fumed at such lack of supervision and when I *did* proceed to give more detailed supervision, he also chipped in periodically and attempted to augment my efforts with some of his own.

Of course, such a senior never had been, nor would be, the General commanding the training establishment.

So it does happen, and I must confess to having to exercise intense self-control myself, when I see mistakes about to occur. But, unless they are unpardonable, I let them occur. Who has not made mistakes, and who can learn without making mistakes? and it is now, in peace-time (the Army's training time) that we can afford to learn from our mistakes.

Pleas that their junior officers and N.-C. O's. could not accept much responsibility should never hold good. If they are unfit for responsibility they are unfit for their appointments. It is granted that, in time of war, there are difficulties in choosing and in training the right men as leaders. But now, in peace-time, is our opportunity to choose the right men; there are plenty of them; and I maintain that the type of stout moral worth combined with average intelligence is more use to a regiment than a possibly more flashy type who cannot be trusted to carry on without supervision.

In British units, the N.-C. O's. of the Guards, and generally of the Cavalry, are reckoned to be more efficient than their fellows in the other arms. This is entirely due to the increased responsibility

inculcated in them through being allowed to exercise their commands with less interference than is the case in the other arms.

In the case of Indian troops, the Frontier Militias and Burma Military Police produce a very fine type of Indian officer. He is possibly not as good on the spit-and-polish side as the I. O. of the regular troops, but for being thoroughly used to act on his own initiative, for not caring a damn whether a B. O. is at hand or not, he has the regular I. O. absolutely beaten. After all, a man can't successfully run a post of say a hundred rifles and a detachment of mounted infantry, miles from the next post, unless he *is* willing to accept responsibility and to do things off his own bat.

Judging from these cases, the key to the problem is the continual practising of leaders in the acceptance of responsibility. I am a firm believer that it is so—give them work to do unaided, keep supervision down to the efficient minimum, get them accustomed to making and biding by their own decisions.

Our present system of co-ordinated training programmes need not cramp the individual. They lay down the goal: give the subordinate commanders ample latitude in their methods of reaching that goal, of producing the required standards by the times appointed. A certain amount on these lines is being done already; there is room for much more.

The dangers of subordinates getting off the rails; the inexperience of their platoon, etc., commanders; the thickness of their non-commissioned officers, and so on and so forth, are correctly pointed out by many; but it is in such fears that the incentive to undue interference by more senior officers usually lies. Experience, under dual-control alone, never yet produced a stout single-seater fighter.

Of course, in many cases company and regimental commanders *do* let their subordinates exercise their own powers of command, and I maintain that it is in these cases that the best results are achieved. The men get to know, respect and obey their own immediate superiors better; and the leaders, being by selection above the average in intelligence and drive, get to know their men and their capabilities better and at the same time develop their own self-confidence and leadership.

The War undoubtedly caused officers of all grades to exert a much tighter control over their subordinates than is necessary now.

I will not open the question of the necessity of the degree of control which often was exercised. The inexperience of the large majority

of regimental soldiers and the short time available for training offered excuse.

But since the War such reasons cannot be put forward. The present time is valuable. The very nature of modern war demands increased initiative and responsibility in the lower ranks ; moreover, if in our time we are to be embroiled in another great war, what will be one of the chief roles of the regular army ? To provide those who are to train the national armies which will spring into being.

Such trainers must themselves be men of intelligence and initiative, willing to accept responsibility : they must be able to develop these qualities in such of their recruits as show promise.

Now is the time to produce such men from the material present in the peace-time regular army : and the way to produce them is to launch the " probables " out into the world of endeavour with little or no assistance from above.

The platoon soccer and hockey teams ; the entry for the drill competition ; the reduction of the number of company third-class shots ; the regimental wrestlers and tent-peggers ; the battalion quota for the torch-light tattoo ; drafting of training programmes for, and the actual handling of the next higher unit ; the drafting of administrative arrangements for the next higher unit ; the preparation of a series of lectures or demonstrations (simple, or elaborate) ; the discussion of emergency action and the practice thereof ; a " next-higher-rank " day, say, once a week ; and a " sans-officer exercise once a month ; all these and many more activities tend to promote responsibility.

Disappointments will be many ; perfection will not be attained in a day ; in fact, efficiency may actually appear to be on the decline. But the Higher Command can understand, sympathise and encourage ; and the net gain to the Army will more than repay all the disappointments borne and the patience expended.

It may be suggested that I offer as novelties practices which have long been customary in many units ; I would submit then that they are not sufficiently widespread. Other suggestions may be found to be impracticable. Whatever be the ultimate conclusion, his article will have served its purpose if it draws responsibility into the limelight and stimulates efforts to inculcate this virtue in those fit to lead our Army whatever their rank may be.

ANNUAL TRAINING.

By

MAJOR N. L. MITCHELL-CARRUTHERS.

(Note.—This article is written principally from the point of view of the Indian Army).

1.—*What is Annual Training?*

Under the present system of Army Training the soldier is conducted through a course of instruction designed to cover each one of the multifarious duties that modern conditions demand of him. The "course" lasts a year and at the end of that time he starts all over again.

To the uninitiated, 12 months may seem a period amply sufficient to cover all details of the training required in a profession so simple as that of killing one's enemies.

The object of this article will be to show that such an idea is erroneous and that twelve months, far from being ample for the purpose is, under modern conditions, grossly inadequate.

In the days of halberdiers and arquebusiers a soldier's training could no doubt be completed in a very short period. Even fifty odd years ago when the soldier's training was almost exclusively restricted to handling his arms, close order drill and loosing off a dozen Martini bullets at a mark a few hundred paces distant, a year was more than enough to ensure and adequate degree of proficiency. But matters are very different now.

The lessons of the war have rendered necessary a largely increased syllabus of training. New weapons have been introduced. A greater tactical knowledge on the part of all ranks is demanded. For many reasons a higher standard of military efficiency and of education is now required throughout the Army. There is, in fact, far more to be got through in the year than before the war.

Yet we still adhere to the observance of our pre-war slogan, "annual training".

The writer does not intend to give in detail the syllabus of training that we set ourselves to carry out during the individual and collective training periods. This can be found by a reference to the training manuals. But, to give an example from the individual training period, it was found that in a company individual training programme for this

year there were included no fewer than fifty-one different items of training. These items did not include the training of specialists nor weapon training but only such things that the ordinary rifleman should carry out. Some of these items such as training in "Field Signals" could be carried out in a twenty minute or half-hour period, while others, such as "wiring" or march discipline, obviously required a longer time.

In India the individual training period lasts from April 1st to October 15th, *i.e.*, 6½ months.

The period that could actually be allotted to this company for individual training was 12 consecutive working days (again, apart from the weapon training period).

As regards the collective training period it is only too well known that during the few months of the cold weather we have, as someone described life, "one damned thing after another."

Apart from the normal platoon, company, battalion and brigade training, followed generally by manœuvres we have a large number of "extras" and several "luxuries."

The former vary in different parts of India.

Some of the most common are, for the British officer, attendance at artillery practice camps, machine gun concentrations, demonstrations, umpiring for other brigades or on manœuvres, and attachments to other arms.

Some of the "luxuries" that are fitted into the winter months are battalion, brigade and district sports, local and district hockey tournaments, wrestling competitions, Army Rifle Association matches, district rifle competitions and assault-at-arms. All of these require time to be spent on them in practice and training and no unit, even if it wished to, could fail to take part in all or most of them.

Apart from the two definite periods allotted to training we have events which may take place at any time of the year such as inspections; inspections of troops, books, barracks, rifles, equipment, medical inspections, inoculations, anti-malarial measures, teeth scrapping operations, etc., etc.

The above examples are quoted, not because they are considered unnecessary but to give an indication of the immense amount we try to get through in the training year.

2.—The Question of Efficiency.

It is hoped that the reader will now agree that it is, to say the least of it, difficult to fit everything we wish to into the training year.

It must also be obvious that certain branches of training will be hurried through while others may have to be omitted altogether. Yet a far higher standard of all-round efficiency is now essential in all ranks. In the case of the Indian Army owing to the new conditions of service we have a shorter time in which to reach the necessary standard. And, as the mobilization and initial maintenance of the Indian Army is entirely dependent on its reserve, it is essential that a man should be a fully trained and efficient soldier on transfer to the Reserve.

Put briefly, we now have to produce a far more highly trained and efficient soldier than before the war and we have a shorter time in which to do it.

On considering this problem two questions occurred to the writer :—

- (1) Is it possible to carry out our greatly increased syllabus of training every year and reach the required standard of efficiency ?
- (2) Is it necessary to carry out the syllabus annually to get the required standard ?

3.—Is it possible ?

If the training year consisted of 365 working days it would probably be possible to carry out the whole of our programme thoroughly and methodically every year. But, unfortunately, this is far from the case in actual practise.

It is difficult to arrive at the number of working days in the year in India, as this varies considerably according to local conditions and as to where a unit is stationed. For the purpose of this article by "working days" is meant the days on which individuals or units are being trained in the duties they will have to carry out in war.

The calculation given below shows the approximate number of working days throughout the training year carried out by the men of an Indian battalion stationed at a four year cantonment in Northern India.

The following must be deducted from the 365 days in the year :—

(a) Leave, three months	.. 90 days.
(b) Thursdays and Sundays, there are 78 in the remaining 9 months. Assuming that work is done on 6 Thursdays during the individual, and 8 Thursdays during the collective training periods—a total of 14, we have 78—14 .. 64 „	
(c) Other holidays—There are 12 holidays for all classes and 34 for particular classes. In a battalion of 3 classes it may be assumed that each class has one-third of the 34 holidays—say 11, we have 12+11 .. 23 „	
(d) Guards and other duties, fatigues, short leave, etc., a minimum estimate is 28 days .. 28 „	
Total	.. 205 „

This leaves 160 working days during the year or about three days a week, and does not take into account possible sickness.

Is it possible to produce a fully trained and efficient soldier in this short time, remembering the “extras” and “luxuries” that have to be included ?

The writer is of opinion that no subject can be thoroughly taught. Training will be hurried through and no more than superficial instruction in any branch of training can be given.

The natural result of all this is inevitable. It is that—to speak plainly—the soldier's instruction is scamped, not wilfully or negligently, but merely because the day is not long enough. The soldier consequently receives a smattering of a large number of different subjects and no real thorough knowledge of any. It may be argued that this half-baked knowledge is gradually perfected throughout the course of his services. This is not the experience of the writer. It is thought that most Indian Army Officers will agree that the Indian of the soldier class is retentive. Once he has learnt anything completely and thoroughly he will never forget it. It is not the same thing to give him a smattering of a large number of subjects one year and to repeat that smattering in the following and subsequent years.

4.—*Is it necessary ?*

The writer is of opinion that we would get better results, that is better trained and more efficient individuals and units if each subject

of training was so thoroughly taught that it would never be forgotten throughout the period of a man's service.

In order to effect this, more time must be devoted to each subject than can be now spared at the rate of three working days a week.

It is always dangerous to generalise from a particular case. The following example is only quoted to make the meaning clear.

Many battalions especially concentrate on the instruction of their signallers. Their training is more carefully and thoroughly carried out than that of other categories of men. So that the majority of men who become regimental signallers have been so well grounded in the subject that they never forget what they have learnt throughout the length of their service, even years after leaving the signallers.

Could not the same principle be applied to all forms of military training ?

The chief requisite is time.

It must also be remembered that now-a-days men joining the Indian Army, are, on the whole, better educated than pre-war recruits and that the number of educated recruits is likely to increase.

Generally speaking, therefore, we have better ground in which to plant the seeds of knowledge and it is more likely that these seeds will take permanent root, provided they are well planted.

5.—The case of the British Officer.

Looked at from yet another point of view the question of carrying out our full programme annually presents a further difficulty.

It can be confidently asserted that at present it is only the British Officer who is capable of training individuals and units for their rôle in war. Every form of training must be carefully supervised by British Officers.

In time it is hoped that the Indian Officer will be fitted to carry this out to a large extent but every regimental officer knows that this ideal has not yet been reached.

The shortage of British Officers in the Indian Army is well known and this fact need not be enlarged on.

It may not, however, be realized that the number of days during the year on which the small number of British Officers are available for instructing their commands are few.

The results of this are sketchy and, perhaps, defective training and, what is more important, the British Officer has few opportunities of instructing those leaders under him who, it is hoped, would take more responsibility as regards training.

The calculation below shows the approximate number of days during the training year on which a British Officer is available to instruct his command.

The following must be deducted from the 365 days in the year :—

(a) Leave, 2 months	.. 60 days.
(b) Thursdays and Sundays, there are 87 in the remaining 10 months. It may again be assumed that work is done on 14 Thursdays, we have 87—14	.. 73 „
(c) Other holidays— <i>vide</i> calculation in para. 3	.. 23 „
(d) Courts-martial, boards, etc., other than regimental which can be arranged so as not to interfere with training	.. 6 „
(e) Examinations, inspections, demonstrations, journeys, lectures, T. E. W. T's. attachments, umpiring, etc.	.. 12 „
Total	.. 174 „

It must be emphasised that this number, 174 days, is a very conservative estimate.

In many stations item (d) may be far larger. Under item (e) attachments alone may take up three weeks to a month, and umpiring the inside of a week.

If an officer attends a course of instruction this number (174 days) will be very considerably increased.

However, taking the low estimate of 174 days this leaves a total of 191 working days in the year, or an average of $3\frac{1}{2}$ days a week, and does not allow for possible sickness.

In order partially to corroborate these figures enquiries were made regarding particular officers and it was found that in June an officer carried out 15 working days and in November another officer did 14.

The many hours which a British Officer has now to spend in office, largely on account of the demand for figures, averages and paper results, must also be mentioned. This factor will not be enlarged on as it is well known, though it must be taken into consideration when studying the question of training.

6.—*Conclusion.*

The reader, if he has got as far as this paragraph will by now know what is suggested as a remedy for the present state of affairs—*Biennial Training.*

In this country there are undoubtedly many difficulties to be overcome. There would at first be many objections to the proposal particularly on the part of experts in certain branches of training. But equally there are difficulties and objections in the case of the present annual training as this article has attempted to show.

The point, however, is, under post-war conditions, would we not get a more efficient soldier by a thorough system of two-yearly training than we do at present?

From the only point of view that the question can be considered, that of preparing our forces for war, would we not get better results if each item of training, whether individual or collective, were so thoroughly and methodically taught that it would become automatic even “in the heat of action.”

It is not considered impossible to draw up a satisfactory scheme of biennial training. The writer does not intend to enter into details of any such scheme in this article. As an outline of a two-years cycle the following is suggested :—

1st April (say 1929)—31st March 1930 Individual training, platoon and company training (possibly elementary battalion training).

Certain of the luxuries mentioned in para. 1.

1st April (1930)—31st March 1931. Leave period (during hot weather).

Individual training, battalion and brigade training. Manœuvres.

The remaining luxuries mentioned in para. 1.

In the case of the Indian Army a sepoy's five years service would then consist of—

- | | | |
|---------------------------------|----|---|
| approximately 1 year | .. | Recruits' training. |
| 1st period of biennial training | .. | Making him a fully trained and efficient soldier both as an individual and as part of the team. |
| 2nd period of biennial training | .. | Repetition so—that "proficiency may be gained and maintained even in the stress of battle." |

By some such system it is considered that, even under present conditions, we would get greater efficiency at a considerably less cost.

And what of the near future when anti-aircraft, anti-tank and anti-gas equipment are added to the regimental armoury and first line transport has been mechanised ?

SIR CHARLES NAPIER AND COURTS MARTIAL.

By

COLONEL H. C. WYLLY, C. B.

In the year 1850 one who had served on the staff of General Sir Charles Napier while that officer was commanding in Scinde, published a small book containing a selection of the more important and more illuminating of the General Orders which Sir Charles had caused to be issued while holding that appointment. The compiler of this little volume was, however, deterred no doubt by a sense of discipline or possibly by a want of humour from including in his work any of the fulminations of the General on the subject of certain of the proceedings of courts martial submitted to him for confirmation, and some of these—which display Sir Charles in what may perhaps without irreverence be called his “lighter moods”, and which are to be found in the volumes of General Orders for 1849 and 1850, when that General was Commander-in-Chief in India, make rather good reading. Possibly the presidents and members of the Courts Martial specially concerned may not have appreciated the amusing side of their Chief’s remarks.

In June, 1849, an ensign of the 38th Native Infantry was tried by court martial for “highly unbecoming conduct” in having appropriated to his own use the money of a brother officer; he was found guilty and sentenced to be dismissed the service, but the Court with surely an excessive good nature, recommended the offender to mercy on the grounds of his “youth and inexperience”!

This gave Sir Charles Napier an opportunity of which he availed himself to the full. “What!”, he wrote, “Pardon and turn back among the officers of the Indian Army a man convicted of felony! On the grounds of youth! Has he not been nearly a year and a half in the army? Has he not a Commission? Is he not by the rules of the Service deemed old enough to sit, and has he not sat as an officer in judgment, and as a magistrate to try and punish others? Is he not old enough to be entrusted and has he not been entrusted with the command of men? With a subaltern’s command in peace and in war? and when men’s lives and safety depend upon the conduct of a subaltern? Has not that glorious uniform, which he has disgraced by two infamous actions, sufficed by its recognised honour to introduce him into the best society, even into the presence of the Sovereign? And would the majority of the Court Martial wish me to leave it on the

back of such a man as the prisoner ? Has he been tempted by ill-fortune and distress ? No ! He avows his health ; he has had the education of a gentleman ; his misconduct seems to be the result of innate moral turpitude ! Had the prisoner been horror-struck at the enormity of his guilt, avowed his crime and cast himself repentant and conscience-smitten upon the mercy of the Court, I could have understood the feelings of those who recommended him to mercy. But such is not the case. On the contrary, while conscious of his guilt, he deliberately adds to his crime by the effrontery, the sophistry and the falsehood of his defence ! To pardon such an offender would be an insult to the Army, *and I will not do it* ”.

One wonders what were the feelings of the President and Members when they re-assembled to digest this thunderbolt from Olympus !

The Commander-in-Chief expressed himself in somewhat similar terms, but rather more crisply, in the case of a jemadar of the 2nd Native Infantry, who in the same year was tried for having given false evidence on a Regimental Court Martial, and who, having been found guilty and sentenced to dismissal from the Army, was recommended to the favourable consideration of the Commander-in-Chief by reason of the prisoner’s “ long service, high standing and the many months he had been in confinement.”

To this appeal Sir Charles made reply as follows, taking the opportunity, which no doubt he thoroughly enjoyed, of expressing his opinion both of the prisoner and of the Court by which he was tried :—

“ When an honourable soldier commits a military crime, not of a disgraceful nature, I always feel disposed to favour him. But when an officer perjures himself as a witness on a Court Martial (as the jemadar has been proved to have done), the Court which convicted him of this heinous offence has no right whatever to recommend him to mercy : to do so is to insult the Army, and I reject this recommendation with the condemnation which it deserves.”

Again in this year a private of the 60th Rifles was tried by Court Martial for shooting and killing a sepoy of the 72nd Native Infantry, was found “ not guilty ” and acquitted. On the proceedings coming before the Commander-in-Chief for confirmation he fairly “ let himself go ” : he wrote :—

“ Confirmed—I cannot say approved, for I never read such inefficient proceedings in my life ! Court—Officiating Judge Advocate General—and evidence—all inefficient ! The prisoner must return to his duty.”

A sepoy of the 7th Native Infantry who was tried for assaulting his superior officer with a sword, was less fortunate than the above mentioned British private for he was sentenced to transportation for life. In his treatment of this particular case General Napier appears to have been somewhat illogical, for he returned the proceedings for revision with the remark that "the Court ought to have sentenced death for this attempt at assassination, as gross as ever attempt was. If the Court does not sentence Capital Punishment, the members cannot complain if they are some day made victims"!

The Court then revised their sentence to that of "suffer death by being hanged," whereupon Napier commuted this to "Hard labour for life"!

A perusal of the charge, finding, sentence and confirmation of the following rather leaves one with the impression that there must be more in it than meets the eye.

A lieutenant of the 45th Native Infantry was tried by Court Martial in February, 1850, for disobedience of orders and for "great disrespect to the Commander-in-Chief in repeating to several people observations about a recent Court Martial which he said the Commander-in-Chief had made him and making a joke of the matter." This officer with the mistaken sense of humour was found "not guilty" of disobedience of orders, but "guilty" of the rest of the charge, with the exception of the words "great disrespect to H. E. the Commander-in-Chief," and was duly sentenced to be reprimanded.

On this coming before him Sir Charles Napier wrote :—

"Approved and confirmed, except that I cannot agree with the Court Martial in thinking that this gallant officer has done anything to demand a reprimand, and therefore I must decline giving him the slightest reprimand. On the contrary his trial has given me a very high opinion of him as an officer"!!

In confirming the finding and sentence of a Court Martial on a captain of the 48th Native Infantry in the same month of this year the Commander-in-Chief grimly remarks: "Those who fancy that this army is a debating society will find themselves egregiously mistaken"!

In confirming the proceedings of a Court Martial on a private of the British Army who was tried for the murder of a native and found "not guilty", the General remarked: "I confirm the Court's verdict.

Let the prisoner have the benefit of it ; but my conviction is different." One may perhaps be pardoned an expression of regret that the remarks of the British private could not also have been appended !

To a lieutenant of the Indian Army who was tried for "unofficer-like conduct in borrowing money from a sergeant" and who was sentenced to be "very severely reprimanded", Sir Charles Napier wrote : "Reprimand. Lieutenant F———. Your sentence is to be 'very severely reprimanded'. I cannot understand why the Court Martial did not cashier you, as, in my opinion, it ought to have done. Public duty makes me regret that you have escaped from a just punishment, but I shall rejoice if the very lenient punishment inflicted may improve your conduct as a British Officer."

General Sir Charles Napier's term of office as Commander-in-Chief was now drawing to a close and his successor, General Sir William Gomm, was already on his way out to relieve him, but General Napier's "confirmatory" style in dealing with Courts Martial shows no falling off. Here is what he writes as to the proceedings of the last Court Martial with which in this short paper it is proposed to deal.

Four subalterns of a British regiment—those were degenerate days be it remembered—were tried by Court Martial, found guilty and sentenced to be reprimanded for having "gamed and betted together at *backgammon*" (!) "until considerable sums of money had been lost by three of them to the fourth." In reprimanding these four young gamblers General Napier read them the following homily :—

"I hope that their expressed contrition may be sincere. Few men can lose money at play without great suffering, none ought to win without remorse ; for what honest or generous man can find satisfaction in having ruined his neighbour ? We may all be assured that the Parable of the Priest, the Levite and the Samaritan was not imparted to us that it should pass by unheeded" !

POLO NOTES.

In the past 10 years polo has been challenged by mechanization and partly, but not wholly, owing to the substitution of motor vehicles for horses, the number of players has decreased in India and Great Britain.

In other countries the number of players has probably increased amongst them America, Canada, The Argentine, Australia, New Zealand and France.

America and France have taken up the game officially for its value as a means of training Army officers and to stimulate the breeding of horses suitable for military purposes. The measures adopted include the purchase of horses as remounts likely to be suitable for polo—the provision of polo grounds at military centres—the introduction of polo as part of the training of military cadets and army officers and concurrently with these the modification of regulations to permit of time spent in learning or playing polo to count as military duty.

As regards the United Kingdom, polo must be regarded as a very expensive game particularly having regard to the very short season during which it can be played. It is true that a few people of independent means can afford both the time and expense to go abroad to play at the end of the polo season in England but this is of course out of the question for soldier players who, even if they happen to be able to afford to transport themselves and their ponies abroad, are usually required for military duties in the autumn and have to face the Armoured Force in Salisbury Plain or elsewhere.

The game received a big set back in India owing to the war but there has been a steady increase in the number of ponies registered annually since 1918, which presumably indicates that more polo is being played each year. In the last year before the war some 1,400 ponies are shown as having been registered under the I. P. A. (Registration is for life and is not an annual affair as regards each pony).

Taking a period of 10 years ending on the 31st March 1927 we find that an average of 627 ponies per year have been registered.

The following are some of the factors that have led to the reduction of the number of players in India in recent years :—

- (i) Increased cost of raw ponies (and consequently of trained ones), increased cost of wages, feed and saddlery.

- (ii) Reduction of the number of British and Indian Cavalry Regiments in India from 47 to 26.
- (iii) Regrouping of Cantonments—the fact that many stations have no longer a mounted unit means that there are not enough players to make polo possible and so a number of individuals give up the game or never take it up.
- (iv) The substitution of the motor car for the horse as the normal means of local transport for officers and civilians alike.
- (v) The reduction of the number of officers obliged to keep chargers.
- (vi) As regards Indian States a very decided falling off in the popularity of polo and the grouping of the resources of states both as to players and ponies into composite teams. There is not the slightest doubt that the motor car has in many cases ousted polo as a means of recreation amongst Indian Princes.

Looking at polo from another point of view in India, it is curious to notice that practically all pre-war tournaments are still held, that a number of fresh tournaments have been introduced, and that there has been practically no appreciable falling off in the number of entries to old established tournaments. This is probably explained by the fact that the loss of players to the game is greatest amongst those who kept say a couple of ponies as a means of transport and used them for polo, but, having been more or less compelled to take on a car in recent years, can no longer afford to keep ponies as well. This class of players did not as a rule go in for tournaments. It is a pity that this restriction of the game should be so but it must be accepted as a sign of the times. It is, however, possible that when it is realized that keeping a car is not necessarily economical, and is not a social necessity having regard to the fact that railways still exist and cars can be hired without incurring heavy depreciation, a change will set in in favour of the horse as a means of providing greater pleasure and better exercise. It depends on a revival of horse breeding and an increased supply of young animals in the market.

It is practically 20 years since polo became internationalized due mainly to the Americans who took up the game on scientific lines and caused it to develop to its present stage.

In this process of evolution, polo like lawn tennis and to some extent like golf, has emerged with certain more or less standardized grades of players. To take top grade we get International polo played by super-players of different countries who must have the best possible ponies—thoroughbreds that turn out right—they must play on perfect grounds, the speed of the game is something of a revelation. The next grade is what is commonly classed as first class polo—from which players and ponies graduate to international standard. Lower down we get medium polo—and lastly novice polo.

It is obvious that players (and ponies to some extent) start in the novice stage and work upwards as far as their skill and opportunities permit them and that they eventually reverse the process.

Reduced to a practical basis this process is exemplified by the handicaps assigned to players and the prices which ponies fetch if they change hands.

It is sometimes argued that the internationalization of polo is not in the best interests of the game but the fact remains that we are forced to accept it. International polo has been created by the law of supply and demand in precisely the same manner as international cricket, golf and tennis have sprung up. Put commercially the public are prepared to support international contests in games and to pay handsomely to see them provided a very high standard of play is maintained. For all practical purposes international contests whether by amateurs or professionals are dependant on the gate.

It is probable that there are more individuals playing polo in India than in the rest of the British Empire and that they play more games of polo per head in the year than elsewhere.

This being the case one might be led to suppose that the standard in India should be comparatively higher and that there should be in the aggregate more of the highest class players.

There are however many factors in India that are opposed to the game reaching the highest standard.

Lack of funds of the majority of players prevents them from securing imported thoroughbred ponies. It is true India has produced some few country bred ponies that have competed successfully in International polo but the number is insignificant and for the moment the supply is distressingly small, possibly the situation will improve if

countrybred racing can be fostered but even so there are practically no individuals in India prepared to breed their own thoroughbred polo ponies and very few who can afford to buy thoroughbreds at what we know to be the cost of producing them in India.

It therefore follows that we have in the aggregate a considerable number of players the large majority of whom are very heavily handicapped in that they have to make the best of relatively inferior ponies as compared with the class of animal played in other countries, excluding of course Burma and China which have local standards to enable them to play very small country ponies.

Another point to be considered is that, with the exception of Indian Princes, players in India do not start the game until they are grown men, some of them indeed have to start to learn to ride after arrival in the country, contrast this with the average player in England. He has probably started riding at a very early age and has followed this up by a certain amount of hunting as a school boy.

In America we find mere children riding blood horses to hounds over very stiff country and polo is commenced literally straight from the nursery, both boys and girls taking part in games in private grounds—Mrs. Hitchcock has taught many of the Meadowbrook players the game at Long Island and Arkin and to this day can be seen playing with her grandchildren.

As to ponies in America one has only to realize the number of people who are breeding thoroughbreds for polo and to learn the amount of encouragement the Polo Association and the Remount Department give to the production of polo ponies.

It would, however, be ungenerous to infer that the superiority of the American sides (including the American Army) in recent years is due solely to the possession of funds and a generous supply of ponies. The Americans work at their polo, they study the game, they organize it, they grade players. In fact they go in for it with characteristic thoroughness and efficiency. Incidentally they are at great pains to educate not only their players in the game but also the supporters of it.

In India we are labouring under a very severe handicap playing relatively poor man's polo on poor man's horseflesh or to some extent on Government hirelings, which of late years may be used under certain conditions, that are a great boon to those lucky enough to be able to supplement their strings from the ranks.

But, having come to the conclusion that we are pretty heavily handicapped when compared with players in other countries and especially in our aspirations to International polo there still remains the possibility of playing polo in India nearly all the year round at a fraction of the cost of playing it for a comparatively short season elsewhere. Many, in fact most soldier players are mounted officers, whose chargers, kept free, may be polo ponies and it is no exaggeration to say that the average polo pony can still be used as a hunter, all ponies as hacks and, if you feel like risking it, most of them will go well after a pig.

THE BARRACK ROOM LAWYER.

By

CAPT. B. C. FLETCHER, M. C.

The Instructions of K. R. 519.

1. Paragraph 519 of the King's Regulations of 1923 used to order that once in every three months sections 4 to 44 of the Army Act should be read out at the head of every unit, and also the following notice :—

“ Under the existing law, any person who shall maliciously and advisedly endeavour to seduce any person or persons serving in His Majesty's forces by sea or by land from his or their duty and allegiance to His Majesty, or to incite or stir up any such person or persons to commit any such act of mutiny, or to commit any traitorous or mutinous act whatsoever, may, on being legally convicted of such offence, be sentenced to penal servitude for the term of the natural life of such person.”

Is This Possible ?

2. It was once my fortune to take over a musketry camp. My predecessor had drafted standing orders which were a model of what standing orders should be. From “ the depredations of white ants ” to “ the destruction of refuse ” nothing had been left to the imagination. I had read these orders out to the troops, and, slightly out of breath, was about to tell the Sergeant-Major that the men could be dismissed to their tents, when he said, “ Excuse me, Sir, do you mind if I read them orders over to the men in their own words ? ”

Evidently Not : A. O. 436 of 1924.

3. Perhaps others have had similar experiences, for A. O. 436 of 1924 cancelled the first part of this paragraph, and ordered that every soldier was to be made acquainted with the purport of sections 4 to 44 of the Army Act, although the notice about mutiny has been retained.

A Lecture is Needed.

4. My object in this article is to write a lecture which any company commander could deliver to his company once a year, say, when the last draft has just joined from home.

LECTURE.

MILITARY LAW.

Object.

1. I want to speak to you this morning about military law for two reasons :—

- i. That you may not be ignorant of the special laws by which you are bound.
- ii. In order to remove one or two wrong ideas which I have noticed are held by soldiers about military law.

Military Law and Martial Law.

2. In the first place, I would ask you to remember the difference between military law and martial law. Military law means that special part of the law of England by which soldiers are governed. Martial law, with which you will seldom be concerned, nearly always means the governing of the civil population by military courts during times of war or public danger.

Necessity for Military Law.

3. One of the first questions which occur to one is, "Why is it necessary to have a special law for the governing of soldiers?" The answer is obvious :—

"Because acts or omissions which in civil life would be mere breaches of contract assume, when committed by soldiers, criminal proportions." Thus a soldier who sleeps at his post may cause the death of a number of his comrades, and it is in order to give a soldier a high sense of his responsibilities that strict obedience to orders is insisted upon in the minor duties of daily routine.

The Advantages of Military Law.

4. I have known soldiers to grumble at the petty restrictions and petty punishments of a soldier's life, but I would ask you to compare the results in the army of petty breaches of discipline with those of civil life. On the third day of his service, Recruit Jones is late for parade. The sergeant instructor orders him to report himself late on parade to the officer. A few words are said to him about the first duty of a soldier being to be punctual and he is told to fall in. A few days later he is late again. This time he is put on a charge and may be given one or two extra drills. A third offence may result in a few days C. B., and a fourth perhaps in seven days. By this time he will have begun

to realize that it is after all just as well to be in time. Now a civilian has managed to get a job ; a few days afterwards he is late for his work, and is warned by his manager. He is late again and is warned again. If he is late again the chances are he will be sacked. No employer is going to be bothered with a man who can't be punctual. So you see that it is perhaps just as well that there is an Army Act and that you are not liable to be thrown out into the world without a job for minor offences.

Army Act, Sections 4, 5 and 6.

5. Sections 4, 5 and 6 of the Army Act deal with offences against military service. Such offences as cowardly behaviour or traitorously helping the enemy are naturally dealt with first as being the most serious offences a soldier can commit. Looting and spreading alarmist reports are also serious, but are not considered quite as bad as the first two. Then there are some offences which are more serious when committed on active service than at other times : a common example would be a sentry drunk or asleep at his post. On active service this is a particularly serious offence because of the consequences it might entail, while, if committed by a recruit early in his service at home, a court or commanding officer might take a lenient and sympathetic view of the case.

Army Act, Sections 7, 8, 9, 10 and 11.

6. The next few sections deal with mutiny and insubordination. Mutiny means defiance of military authority by two or more soldiers. It is also an offence to try to get other people to mutiny. A cunning and unscrupulous man might persuade some men to mutiny while he himself remained in the background.

Insubordination.

7. Insubordination includes striking superior officers and disobedience of orders. The Army Act is careful to allow discrimination between degrees of insubordination. To refuse to obey an order on active service is a very serious offence indeed, while to neglect to obey a garrison order may simply be an omission due to ignorance or laziness.

Army Act, Sections 12, 13, 14 and 15.

8. The next sections deal with desertion, fraudulent enlistment and absence without leave. The difference between desertion and absence without leave is in the intention. To obtain a conviction on a

charge of desertion it must be shown that the accused intended either never to return or to avoid some important duty. If a man who had been absent for some days was found on board ship in plain clothes, the presumption would be that he had intended never to return, and he would be convicted of desertion; or if a man, on the day on which he was due to entrain for a port of embarkation for India, went absent and remained absent until the boat had sailed, he would be guilty of desertion, although he might return of his own accord to his home service battalion.

Fraudulent Enlistment.

9. In some cases soldiers have deserted from one regiment and enlisted in another. This is "fraudulent enlistment", but where such fraudulent enlistment was committed in order to avoid some important duty, such as I have just mentioned, the man may be convicted of desertion.

Army Act, Section 18.

10. Section 18 of the Army Act is an interesting one. The first three paragraphs have to do with malingering, that is to say, any man who pretends to be ill, or makes himself ill, or wounds himself, or by disobeying hospital orders prolongs his disease, is liable to imprisonment. The next paragraph deals with what the army calls "theft from a comrade". Ordinary theft is dealt with as a civil offence, but theft from a comrade is regarded by the army as a specially despicable crime, since by the mere routine of his daily life a soldier constantly has his property lying about in barrack rooms or tents, and he depends upon the honesty of his comrades for its safety. The last paragraph of this section deals with any act which may be defined as cheating, cruel, indecent or unnatural. Any such act is an offence.

Army Act, Section 19.

11. Army Act, Section 19, deals with drunkenness, the maximum punishment for which is imprisonment. Now drunkenness is one of the commonest offences in the army, and it is very uncommon for drunkenness to be punished with imprisonment. There are certain paragraphs in King's Regulations which guide a Commanding Officer in disposing of a case of drunkenness. The ruling is that for a first offence of drunkenness, provided that there are no aggravating circumstances, the soldier shall be admonished. For the second he will be fined 10/-, for the third and every subsequent offence 20/-; but if the

third or subsequent offence is within six months of the last offence the fine is increased to 30/-, and if within three months it is increased to 40/-. These are actually minimum punishments and are awarded for what the soldier calls a "simple drunk". In the case of a drunk in town or in some public place of amusement the C. O. may award C. B. or detention in addition. Naturally drunkenness on active service is regarded as a very serious offence and is liable to be punished by imprisonment.

Definition of Drunkenness.

12. If any of you have read some of the reports of police court proceedings, you may have noticed that the police go to great lengths to prove that people have been drunk. The army does not do that. A man is judged to be drunk if he is unfit for duty. If a N.-C. O. is doubtful in his mind whether a man is drunk or not he should say to himself, "Is he fit to go on guard"? He should not have any difficulty in making up his mind on this point.

Army Act, Sections 20, 21 and 22.

13. The next three sections deal with the arrest and custody of prisoners. It is an offence to allow anyone to escape, more particularly if it is done on purpose, and it is an offence to escape oneself if one is under arrest. It is also an offence to put a man under arrest without submitting a charge against him. This is ruled in order to prevent the illegal arrest of soldiers by their superiors.

Army Act, Section 24.

14. Section 24 deals with injury to or loss of equipment. To constitute an offence a soldier must lose his kit by neglect; if he can show that he took all proper precautions he cannot be convicted of an offence under this section. This particularly affects you in respect of your rifles and bolts. If a soldier loses his bolt it is presumed that he must have been guilty of some neglect by which it became lost. It is then up to the soldier to show that he took all proper precautions, that he complied with all the orders on the subject, and that therefore the loss was not due to any neglect on his part. The court will not then be able to find him guilty.

Army Act, Sections 25, 26 and 27.

15. The next three sections deal with the making of false statements in documents, returns, etc. Such acts are cheating and we don't need to read the Army Act to learn that they are wrong. I would,

however, draw your attention to paragraph (2) of section 27, which specifically mentions making a false statement affecting the character of an officer or a soldier at the time of making a complaint. If you have a genuine complaint to make there should be no reason not to tell the truth, or to suppress part of it. Be particularly careful about this.

Army Act, Sections 28 and 29.

16. A court-martial is protected in much the same way as other courts of law against contempt of court and false evidence.

Army Act, Sections 30 and 31.

17. Sections 30 and 31 of the Army Act provide for the punishment of any person subject to military law who illegally obtains billets, or maltreats the people he is billeted with, or of anyone who illegally commandeers transport.

Army Act, Sections 32, 33 and 34.

18. The next three sections concern offences in relation to enlistment. It is an offence for a recruit to give a false answer to any of the questions put to him during attestation. It is also an offence for any man who has been discharged with disgrace from any of His Majesty's forces to enlist without declaring the circumstances of his discharge.

Army Act, Section 35.

19. Army Act, Section 35, makes it an offence to use traitorous words regarding the King.

Army Act, Section 36.

20. Army Act, Section 36, makes it an offence to give away information about the numbers and dispositions of our troops, if the court trying the case find that harm has been done thereby.

Army Act, Section 37.

21. Section 37 has two paragraphs. The first makes it an offence for any officer or N.-C. O. to strike or ill-treat a private. The second makes an offence the detention by an officer or N.-C. O. of the pay lawfully due to a soldier.

Army Act, Section 38.

22. Under Section 38 it is an offence to take part in a duel or to attempt to commit suicide.

Army Act, Section 40.

23. Section 40 covers all offences which are generally called "irregular conduct," but such irregular conduct must be "to the prejudice of good order and military discipline." I experienced a case in which a corporal put in a charge of irregular conduct against a bandsman whom he said he had seen kissing his (the corporal's) wife behind a hedge. This may have been to the prejudice of good order but it certainly had nothing to do with military discipline.

Army Act, Section 41.

24. All civil offences can be tried by courts-martial, but in peace time and in stations in which civil courts are available most civil offences will be tried by civil courts, while certain of the more serious crimes must be so tried.

Army Act, Section 43.

25. The Army Act definitely lays down the procedure for making complaints. It is simply this:—A complaint must be made to your Company Commander. He usually has a certain time every day when he holds his company orderly room, and it is then that complaints should be made. Inform the orderly sergeant that you want to make a complaint, and parade at the company office at the proper time. If the Company Commander turns your complaint down then you may ask to see the Commanding Officer, and from him you may go to the Brigadier or General. All these officers are bound to investigate the case, although they are only bound to give redress if they are satisfied of the justice of the complaint.

Army Act, Section 44.

26. We must now talk about punishments. These vary from the supreme penalty of death to such minor awards as extra drills and confinement to barracks. Death can be awarded for a few only of the most serious military offences, and for murder, when it is obligatory. When a court sentences a soldier to penal servitude or to imprisonment it is usual to sentence him to be discharged with ignominy as well. Detention was introduced into the army in order that soldiers might be given the punishment of imprisonment without the stigma of having been in prison. A man is sent to prison for a criminal offence. Now some military offences are serious without being actually criminal, and it is in order to punish a soldier adequately for these serious

offences, without mixing him up with a number of house-breakers and thieves that detention has been devised. For various offences there are forfeitures of pay and stoppages. For instance for every day you may be absent without leave you forfeit automatically one day's pay. Confinement to barracks, which is only a minor award, is limited to fourteen days.

Right of Soldier to Elect Trial by Court-Martial.

27. With reference to detention and forfeiture of pay, you know of course that certain of these punishments up to strictly limited amounts may be awarded by your Company and Commanding Officers. It is, however, laid down that where an award involves a forfeiture of pay the soldier has the right to elect trial by court-martial. We will suppose that a soldier is in front of his C. O. on a charge and that the C. O. decides that it is a case which deserves detention. During detention a soldier draws no pay, the C. O. should therefore ask the soldier whether he wishes to be tried by court-martial. If the soldier is convinced of his own innocence, which he thinks will be proved if the matter is gone into with the thoroughness of a court, he should claim a court-martial. Should the C. O. forget to ask the soldier this question, he may claim a court any time before he has been taken off to the guard-room to begin his punishment. This rule has sometimes led to misunderstanding. Soldiers have sometimes thought that they are entitled to refuse any punishment, and to claim trial by court-martial in any case. The rule only applies to punishments involving forfeiture of pay. If a soldier has been given an award by his Company Commander, and he thinks that he has been unjustly treated, he should, after he has been marched out, ask to be allowed to see the Company Commander again. He should then recapitulate what he has to say, and if the Company Commander says that he sees no reason to change his mind, he should ask to see the C. O., who has power if he sees fit to reduce the award.

The Punishment of Non-Commissioned Officers.

28. Non-commissioned officers are not liable to minor punishments such as C. B., but are liable to forfeiture of seniority, reduction to a lower rank, or to the ranks, and to reprimands and severe reprimands. These last two involve entries in their regimental conduct sheets, and naturally affect their final assessments of character.

Notes.

That concludes a lecture which possibly has one virtue only, that it does comply with the orders on the subject. Certain sections have not been explained, *e.g.*, 16, 17 and 23, because they are not normally applicable to the men, and because in any case they concern forms of theft, which the men know to be punishable in the ordinary course of civil law.

This lecture is bound to be very dull unless it is delivered by an officer who can deal lightly with such a heavy subject. On the other hand Training and Manœuvre Regulations give ample warning against making jokes to those who do not do so naturally.

THE MAHRATTA WAR OF 1803-04.

By

CAPTAIN N. E. L. PEARSE, M. C.

THE BRITISH IN INDIA, 1800.

By the beginning of the 19th century the British had not only obtained a firm foothold in India by the definite acquirement of such territories as Behar, Bengal, and Madras, but had extended her influence far beyond her normal boundaries by guaranteeing protection to certain native states and forming offensive and defensive alliances with others. Hence, immediately prior to the First Mahratta War, British influence was predominant throughout nearly one-half of the Indian Peninsular; in the east and north in Bengal, Behar, and Oudh; in the south from Cape Comorin to the northern-most boundaries of Mysore, the Dominions of the Nizam, and the Circars.

In the middle, extending from sea to sea, were a number of semi-independent states known as the Mahratta Confederacy. While, further north still, beyond the State of Rajputana and the River Sutlej, were a number of Afghan and Sikh States.

Into such political divisions had the once powerful Mogul Empire fallen; now only represented by the Emperor Shah Alam in Delhi, old and blind, and a practical prisoner of an unscrupulous Mahratta prince.

THE MAHRATTA CONFEDERACY.

The Mahratta Confederacy, although in theory still part of the Mogul Empire, was in reality a loose combination of semi-independent principalities, under the nominal sovereignty of the Raja of Satara who endeavoured to exercise control through an hereditary minister, his Peshwa, who also became a territorial ruler.

Their combined territories consisted of an area equal to about one-third of India, the boundaries of which extended northwards along the borders of Rajputana, the Punjab and Oudh; eastwards to the borders of Behar and Bengal to the east coast; southwards, from the east coast along the borders of the Circars, the territories of the Nizam and the north-western frontiers of Mysore as far as the west coast, and lastly, in the west along the coast between Mysore to just short of the mouth of the Indus.

The Chief Rulers were, Scindia, in the north, whose capital was Gwalior ; Holkar, the ruler of Indore ; the Bhonsla at Nagpur and the Peshwa at Poona. These chiefs were regarded as the foremost warriors of Hindustan, continually carrying out a series of wars, either on behalf of the confederacy as a whole, or singly against neighbouring states, and not seldom with each other. Their motive was solely plunder ; and to this end they maintained large mercenary forces, horse and foot, mostly trained by Europeans, chiefly Frenchmen. The bulk of their forces consisted of cavalry, composed of lawless men of every race and caste ; Persians, Afghans, Arabs, and in some cases negroes. With these hordes they ravaged the countryside descending swiftly and suddenly upon their neighbours at odd periods, when having obtained such loot as they were in search of, they retired to their own territories even more swiftly than they had come.

CAUSE OF THE MAHRATTA WAR.

At this period, affairs in India were controlled by a far-sighted and capable Governor-General, the Earl of Mornington, better known as Lord Wellesley, brother of Sir Arthur Wellesley, afterwards the famous Duke of Wellington, who realized that Britain must ultimately be supreme in India or that the country would fall back into a land of minor wars, feuds, and upheavals of which the quarrels of the Mahrattas were but a small example. To accomplish this, it was necessary, firstly, to banish French influence from the land, and secondly, to bring the remaining principalities under British influence. It was not long before Tippoo Sultan was defeated and a prince more sympathetic to the British cause placed upon the throne of Mysore ; while by means of a "subsidiary treaty" French influence was banished from, and protection assured to, the Dominions of the Nizam.

Meanwhile the Mahratta rulers had once again quarrelled amongst themselves, and Holkar had marched against and defeated the combined forces of Scindia and the Peshwa, in the neighbourhood of Poona from which city the Peshwa fled.

He appealed for British help, which was granted, and he was reinstalled in his capital on signing the Treaty of Bassein, by which he agreed to ally himself with the British in return for their protection, and to give securities for the pay of British troops within his territory.

The conditions of this treaty were similar to those which had been entered into with other princes under British protection.

Although the object was the displacement of foreign influence and the control of their foreign policy, their internal affairs were left unmolested and the stability of their governments assured.

The action of the Peshwa greatly incensed the other Mahratta chiefs, who regarded it as betrayal of the confederacy as a whole, and the sacrifice of their individual independence. The Governor-General endeavoured to pursue a policy of "peaceful penetration" and even now hoped that the remaining Mahratta chiefs would be convinced of the sincerity of his motives and realize the benefit which would be derived from British friendship. At the same time, he took steps to prepare for a war which was in some quarters regarded as inevitable, while in others it was believed that the Mahrattas would hesitate to cross swords with the power which had reduced the powerful forces of the Tippoo Sultan.

THE BRITISH AND MAHRATTA FORCES.

At this time the British and Mahratta forces consisted roughly of 47,000 (with allies) and 75,000 men respectively. In the north, General Lake had at his disposal some 10,000 men, including three British regiments of cavalry, and one battalion of British Infantry, assembled in the neighbourhood of Cawnpore. In addition to this force, between three and four thousand men were assembled near Allahabad for the invasion of the Bundelcund while 2,000 more were collected at Mirzapore, making a total of some 16,000 men. In the south, Sir Arthur Wellesley, had control of a number of widely distributed detachments amounting to 31,000 men. On the east coast were 5,000 men, including about 600 European troops at Ganjan ready to invade the province of Cuttack and the possessions of the Raja of Berar. On the west coast between Guzrat and Surat were nearly 3,000 British and 4,000 native infantry which, after all garrisons had been provided for, formed a field force of 4,000 men. Under his own personal command, Sir Arthur Wellesley had 16,000 men, which total included 1,600 Europeans and 5,000 Mysore and Mahratta horse. In addition to, but temporarily detached from his force, was the Hyderabad contingent of 9,000 men, including 900 Europeans under the command of Colonel Stevenson.

The opposing Mahratta forces were divided into two portions. In the north, part of Scindia's army numbering 25,000 of which about 20,000 were horse, under the command of a Frenchman named Perron.

In the south the remainder of Scindia's army combined with that of the Raja of Berar, consisting of 38,000 horse, 10,000 infantry, 1,000 raket and matchlock men and 190 guns, in all about 50,000 men.

THE SOUTHERN CAMPAIGN.

In May 1803, Bagi Rao, the Peshwa, was escorted back to the city of Poona and re-seated upon his throne. Although Scindia had openly declared that the Treaty of Bassein was in no way injurious to him or any other Mahratta chieftain, there is no doubt that he inwardly regarded it as unacceptable. Nevertheless, while expressing his peaceful intentions, he arranged that Bhonsla, the Raja of Berar, should meet him to discuss the question. The meeting place was at Ajunta Ghaut, on the frontier of the Nizam's dominions, and Bhonsla arrived escorted by his whole army.

Such an incident could not be regarded by the British, with other than grave suspicion. Accordingly Scindia was asked his intentions, and further to withdraw his troops immediately, by the British resident at his camp.

But Scindia procrastinated, and although the resident at intervals demanded his dismissal he was always prevailed upon to continue negotiations and assured of the Mahratta's peaceful intentions. Finally, by August, Scindia, having made no attempt to withdraw his troops, Col. Collins, the resident, left his camp and the rupture with this prince was complete.

AHMADNAGGAR.

In anticipation of the coming campaign, Wellesley had long since decided that an advanced base was necessary, and he had long since set eyes upon Ahmadnagar, which was not only near the coast but contained practically everything he required. Accordingly, having gradually approached the town during the last days of the negotiations with Scindia, he was no sooner aware of the rupture, than he immediately marched against and stormed the town and fortress of Ahmadnagar.

Although regarded as almost impregnable, it was attacked and captured with such swiftness, skill and audacity, that the British losses were no more than 169 men, and the enemy were so bewildered that a Mahratta chief wrote, "The English are a strange people and their General a wonderful man. They came here in the morning looked at the pettah-wall, walked over it, killed all the garrison and returned to breakfast."

Besides being a desirable base, the possession of the fortress enabled the British to cover Poona and the Nizam's western frontier, cutting off Scindia from the southern, and control all territory south of the Godavery.

ASSAYE.

On the 21st September the enemy, now joined by his infantry, was assembled with his entire force between Bokerdun and Jaffarbad. On the same day Wellesley met Stevenson at Bundapore and arranged to march upon the enemy in two separate forces on the evening of the 24th. On the 23rd Wellesley reached Naulniah, where he learnt that the Mahratta chiefs had moved away with their cavalry in the morning but had left their infantry in position. Stevenson had not yet rejoined him, but he nevertheless, decided to attack at once. On making a reconnaissance, however, he discovered to his surprise, that not only were the infantry alone in position, but that the entire army of Scindia and Bhonsla, were encamped on a peninsular formed by the rivers Kaitna in their front, and the Juah in their rear. The Kaitna was impassable except for certain fords; the Juah was of smaller volume, but had very steep banks; and the ground along both rivers was much broken by ravines.

The enemy was in great force; the cavalry numbering twenty or thirty thousand, formed the right of the hostile army about the village of Bokerdun; and their encampment extended eastward till it met that of the infantry, which prolonged the line to the village of Assaye. Among these last were at least 16 regular battalions, with a certain proportion of European Officers, and in addition a mob of irregulars belonging to the Mahratta chiefs and a large force of regular artillerymen with over 100 guns. To oppose this host, Wellesley had present, no more than two battalions of British and five of native infantry; one regiment of British and three of native cavalry, one battalion of pioneers and over five hundred artillerymen of whom one-third were Europeans.

Wellesley was now in an extremely awkward position, having with him only a portion of his own force, he was unexpectedly confronted with an enemy in full force, and faced with the possibility of having to violate his own principles, namely, that the enemy should never be attacked in positions of his own choice or allowed to attack the British, no matter how strongly they might be entrenched. Yet, if

he attempted to retire to Naulniah and wait the arrival of Stevenson—who was only twelve miles away—he would certainly be followed and surrounded by the enemies cavalry and harassed until nightfall. On the other hand, if he assailed the Mahrattas at once near the junction of the Kaitna and Juah, their straitened position would forbid them to take advantage of their enormous preponderance in numbers and he could use the two streams for the protection of his flanks. Defeat, however, of his own force in such a narrow tongue of land would mean certain annihilation. He decided to accept this risk, and discovering a ford across the Kaitna, between the two villages of Peepalgaon and Warror, he crossed the river, covering his rear with his regular cavalry. Wellesley left his irregular horse, part of it Mysorean and part of it from the Peshwa's army, to check the enemy south of the Kaitna. No attempt was made to dispute the passage of the ford, other than by the artillery of the enemy by which the British were badly mauled. He did not, however, believe the enemy capable of manœuvring to counter his dispositions. Consequently, he was again surprised when the Mahrattas changed their position to their threatened flank, taking post in good order to the left, such that this flank rested on the village of Assaye. In the new position, however, there was room for no more than half the Mahratta infantry, the remainder taking up a second position parallel to the banks of the Juah, with their left flank also resting about the village of Assaye. The British on taking up their position discovered that the distance between the two rivers was greater than had originally been allowed for and that owing to the unexpected dispositions of the enemy their flanks were in danger.

The British had been drawn up in triple line of battle, but Wellesley now ordered the picquets, on the left flank, to take ground to their right and make room for two more regiments on their left, while a third...the 74th...inclined to take up a position on the right of the picquet. He ordered the cavalry to file up the Juah to protect the right flank.

Hardly had the movement been ordered than the enemy opened a murderous fire of ever increasing intensity, causing heavy casualties in the British ranks. The fight was severest at first in the centre and on the left flank, but under Wellesley's personal leadership and after an extremely hard fight, the enemy's right was pushed back in disorder and many of his guns captured.

All, however, was wrong on the right which had become engaged before the new dispositions had been completed. The 74th tried in vain to take up their appointed position, while the commander of the picquets, . . . contrary to orders and forgetting the reason for the change of position, . . . moved straight upon Assaye, exposed to such a terrific fire, that although they fought valiantly, they finally broke and ran back upon the 74th which had so far supported them. A small body of Mahratta horse on this flank, seizing the opportunity swooped down upon this luckless regiment. Though reduced to about one company, they were unbroken, when Colonel Maxwell, commanding the British Cavalry, counter-attacked the Mahrattas with two regiments and then bore down upon the left of the enemy's first line. These stood firm for a time, then broke and fled across the river, hotly pursued. Meanwhile the left of the line was wheeled to the right, in spite of exposure to the main mass of Mahratta cavalry on this flank, with but one British regiment detailed for its protection. The enemy now formed a second line of battle with their unbroken centre troops, their right resting upon Assaye and their left upon the Juah. A fresh attack upon Assaye was now ordered, but the enemy on seeing the British once more prepare to advance, did not await the assault but retired across the Juah and made good their retreat.

There remained only one menace; Pohlmann's brigade, which had remained during the battle in rear of the enemy's cavalry. This was attacked by Maxwell, who had now returned from his pursuit, but was not however pushed with the usual vigour. Nevertheless, Pohlmann took advantage of the lull to retire from the field. By 6 o'clock the action was closed leaving the British victorious, in one of the hardest fought battles of the British Army. Greatly outnumbered and surprised on ground not of his own choice it was only by the dogged perseverance of the troops, and the strong leadership on the part of Wellesley, that the day was won. The Mahratta infantry fought bravely, while the valour of their gunners is beyond praise; they fought their guns until absolutely overwhelmed long after the retirement of the infantry, and in many cases feigning death, until the British troops had advanced, when they once more manned their guns and caused much damage to the rear. On the other hand the brigade commanded by Pohlmann remained with the inactive mass of cavalry throughout the day, making no attempt to assist in the main battle. Had he done

his duty on the British flank, he could not but have helped causing Wellesley much embarrassment. Had even a portion of the vast mass of Mahratta cavalry attempted to take part in the fight, their action could hardly have failed to have made the issue extremely doubtful, if not disastrous to the British arms.

The British casualties in this battle were so severe....some 1,500 odd....that Wellesley was in no condition to pursue the enemy. Stevenson having lost his way in a defile, did not join Wellesley until late next day, the 24th.

PURSUIT.

As soon as he had rendered all possible medical aid, he moved off in pursuit of the Mahrattas, who had passed the night of the 23rd some 12 miles distant. Hearing of Stevenson's advance, they moved off in all haste to the foot of the Ajunta Ghaut where they parted into two divisions; the regular infantry retiring across the Nerbudda, towards which river Stevenson followed; while Scindia and Bhonsla moved westward along the Taptee with the supposed intention of marching upon Poona. Wellesley therefore considered that he could not march northward without endangering Poona or the Nizam's dominions.

Hence Stevenson was ordered to take Burhanpur and Asseerghur, while he himself rapidly moved towards Aurungabad. Scindia finding his way to Poona barred, now (October 15th) turned and marched northward, and was immediately followed by Wellesley in order to anticipate any movement he might make against Stevenson. The fall of Burhanpur and Asseerghur having robbed Scindia of much of his power, Wellesley now turned his attention to Bhonsla and directed Stevenson to make ready to besiege that Raja's Chief stronghold, Gawilghur. No sooner had he done so than he learned that Bhonsla had separated from Scindia and marched to Chandore; whereupon directing Stevenson to keep in touch with Scindia, he re-ascended the Adjunta Ghaut on the 24th and prepared to prevent any inroad south. On the 29th he reached Aurungabad and from there followed Bhonsla as far as Patee, when he again turned northward in the hope that an invasion of Berar would recall the Raja to defend his own territory.

On the 12th November Scindia sued for peace and Wellesley realizing that he could do no more harm to him but that he (Scindia) could greatly embarrass his operations against Berar in general and

Gawilghur in particular, agreed, on the 22nd, to suspend hostilities on condition that Scindia kept his forces at least 50 miles from Ellich-poor or any British Troops.

Entering Berar on the 25th, and marching due north to Parterly, he united with Stevenson there on the 29th. Scindia, however, as might have been expected, made no attempt to carry out the terms of the armistice, and on reaching Parterly after a long march, a force of Bhonsla which included a number of Scindia's troops, was found to be drawn up in line of battle some five miles distant on the plain of Argaum.

Tired as his troops were, Wellesley decided to attack, and marched straight towards the enemy's position which extended along a front of some five miles. The fighting was desperate, and the enemy's artillery created much disorganization during the earlier stages of the battle. The furious charges of Scindia's horse were, however, gallantly and successfully repulsed. The battle continued until late in the evening when the enemy's resistance was finally overcome. Flying from the field in great disorder, the disorganized troops were hotly pursued by cavalry throughout the night, and some 3,000 of the enemy together with many elephants and camels and huge quantities of baggage were captured. On the following day Stevenson's force took up the pursuit, being followed on the next day by Wellesley. On the 5th December they once more joined forces at Ellichpoor. After halting there a day, Wellesley pushed on with his whole force to Gawilghur, where the defeated infantry had taken refuge. Arriving before the fortress, some days were spent in making the necessary preparations for the assault which was delivered on the morning of the 15th December. The defence of the fortress, although held by a garrison of some 4,000 was ill organized and it was taken with but a loss of 14 killed and 112 wounded, while the greater number of the enemy were either killed or driven over the walls and dashed to pieces.

Meanwhile the independent force . . . some 5,000 strong, . . . which had assembled at Ganjam, for the invasion of the province of Cuttack, had met with complete success, the capital being entered on the 14th October.

The capture of Gawilghur, however, finally crushed the spirit of the Raja of Berar, who immediately sued for peace, and on the 17th a treaty was signed ceding the province of Cuttack to the East India Company.

Thus one member of the Confederacy was crushed and it was not long before another was to share his fate.

THE NORTHERN CAMPAIGN.

While Wellesley was harassing the Mahratta forces in the south, a campaign of equal importance was being carried on by General Lord Lake in the north, against the remaining forces of Scindia, which were commanded by the Frenchman, Perron, and which consisted of some 25,000 men, while the total forces at the disposal of General Lake were but 16,000. In forming his plan of campaign, Lake had but one object in view, namely, the destruction of the enemy's main forces in the field and to this end he concentrated all his available troops at Kanoge, preparatory to an invasion of the Mahratta territory, which he entered on the 29th August marching straight upon the fortress of Aligarh.

The approach to Aligarh was, however, found to be barred by a force of some 20,000 Mahratta cavalry, which had taken post on the plain behind a huge morass, with their right wing protected by the guns of Aligarh, and their left resting upon the village. Lake taking personal command of his mounted troops, endeavoured to turn the swamp and lead them to the attack, but the enemy were in no mood for a general action and retired steadily from the field. Meanwhile, Perron had withdrawn to Agra, leaving the position to be defended by one Colonel Pedron. Lake summoned this officer to surrender, but finding that he was only anxious to gain time to complete his defences, decided to attack, and assaulted the fortress next day, the 4th September.

The fight lasted but an hour when the fort of Aligarh was won, Pedron captured, together with 281 guns, and large quantities of stores. Having strengthened the defences and left a native battalion as garrison, Lake marched on the 7th towards Delhi, having received news that Louis Bourquain, one of Scindia's French Officers, was employing the name and prestige of the Mogul Emperor in order to strengthen his position among the native chiefs.

The same evening a communication was received from Perron reporting that he had left Scindia's service, and asking for a safe conduct to Lucknow. This, the General gladly granted, being thankful to be rid of this formidable antagonist.

DELHI.

Advancing towards the city of Delhi there appeared drawn up on the rising ground in front of the Jumna some 19,000 men of Louis

Bourquain, arrayed for battle. To oppose this host Lake had but 4,500 men available for immediate action, but by the skillful use of his cavalry he lured the enemy from their positions, then throwing his infantry upon them at a disadvantage, completely defeated the enemy who broke and fled in all directions, and were then pursued with all his available horse. The army then encamped upon the banks of the Jumna for a few days before entering the city, which was entered on the 16th September, and Lake was welcomed by the Emperor Shah Alam to the capital of the Mogul Empire.

Louis Bourquain having surrendered on the 14th and Lake having arranged treaties with minor chiefs, after garrisoning the city, returned towards Agra, with the intention of capturing that stronghold.

AGRA.

On arrival, the fort having refused to surrender, it was immediately attacked and 26 guns taken, while the final surrender included 164 guns and all the stores of this enormous stronghold.

The capture of this great fortress, the key of Hindustan, produced a profound impression upon the native mind, and resulted in 2,500 of Scindia's infantry taking service under the British, while the Raja of Bhurtpore, with whom Lake had concluded a treaty *en route* from Delhi, brought a contingent of 5,000 horse.

LASWARRIE.

Scindia's regular infantry were not, however, entirely extinguished, he having just before the battle of Assaye, detached 15 battalions from the Deccan which together with two battalions of Bourquain's, which had escaped from Delhi, made up a total force of 9,000 infantry. These troops were commanded by a good Mahratta leader named Abaji, who had in addition 5,000 excellent horse.

Lake was not inclined to let Abaji roam Hindustan at will, and on the 27th he left Agra in a westerly direction in search of the enemy. After a number of forced marches he reached, on the 31st, a spot where the enemy had encamped that morning. Intent upon overtaking him, Lake started the same night with the whole of his cavalry, leaving his infantry to follow next day.

Traversing some 25 miles in six hours, he came upon the enemy on the line of march, on the 1st November, Abaji, however, contrived to gain sufficient time to take up a strong position between the villages of Laswarrie and Mohaulpore, the latter of which was fortified.

Immediately in rear of Laswarrie flowed a small stream with banks so steep as to be barely accessible ; and from its front a ravine ran diagonally through the right wing of the Mahratta line of battle. Along the whole length of that line extended a broad strip of high grass which concealed their array and their 72 guns completely from the view of pursuers. Their intentions were therefore obscure. Having only by great exertions overtaken them Lake was determined not to let them escape. He therefore, ordered his advanced guard and the first brigade of cavalry to move to the point where the enemy were last seen in motion ; which as a matter of fact proved to be the left flank of their position, in the face of a galling fire of musketry and artillery. In other quarters the remainder delivered their attacks with as little permanent effect.

Macan, who was directed upon the Mahratta right, galloped down upon their guns, but they, being hidden in the long grass, were able to withhold their fire until the horses were within 20 yards of them. The cavalry however, crashed right through them, in spite of the fact that the guns were chained together and further resistance was experienced from the infantry entrenched behind waggons and carts. Nevertheless unlaunted, Macan, charged back again with the same irresistible gallantry and then again reforming, repeated the charge a third time. The troopers suffered heavily and captured many guns, but were unable to retain them without the help of infantry. About 11 o'clock, the infantry, consisting of the 76th and four native battalions arrived after a march of 25 miles greatly fatigued and were therefore given an hour's respite for breakfast. Their arrival was the signal for Abaji to sue for terms and Lake gave him an hour to accept his conditions, at the same time making his dispositions for attack. Abaji meanwhile shifted his ground, throwing back his right on a new position. His infantry formed two lines covering the front and rear of Mohaulpore, while the cavalry extended beyond it almost to the stream with its right flank in the air. Lake therefore formed his battalions into two columns along the brink of the stream ; the first being designed to advance and turn Abaji's right flank, and the second column to support the first. Macan's cavalry was to support the infantry, while the first and second brigades were extended widely across the plain on the British right, with the galloping guns and a few field pieces pushed well forward in two groups, each with a squadron escort so as to increase and contain the Mahratta front.

The stipulated hour having arrived without a sign from Abaji, Lake advanced his infantry under shelter of the long grass, but their march having been detected, Abaji avoided the danger to his threatened flank by throwing back his right wing, (somewhat in the shape of an L), and at the same time taking the British column in flank.

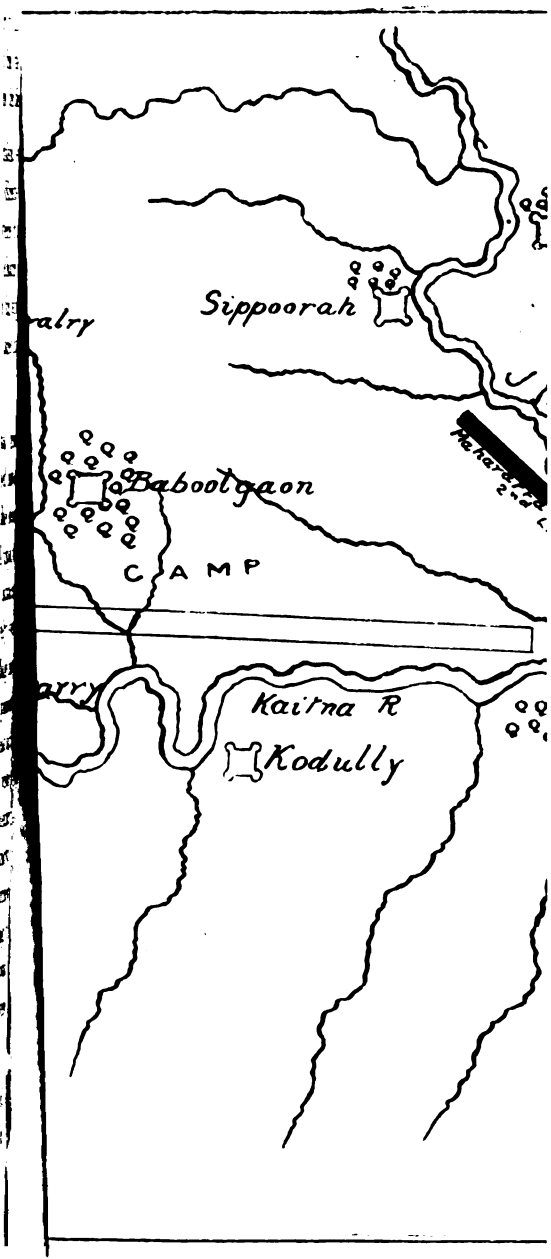
The Mahratta guns outmatched those of the British, severely punishing the leading columns with a furious and well directed fire, while a body of cavalry bore down upon their flank, but were repulsed by the steadiness of the 76th. However, before a second charge could be delivered a regiment of British cavalry was ordered up in support, and the Mahratta horse which was about to advance again and charge, beat a hasty retreat.

The British cavalry now charged the line of Mahratta guns in spite of their furious fire, and scattered the gunners; crashed into the first line of infantry which broke, and then passed on to the second, sweeping away its right; and finally wheeling to the left, fell upon the Mahratta horse and routed them completely. Lake now attacked with his infantry, Abaji's second line, which contested bravely every inch of ground. But at length it was forced back from the village into the plain, and cut to pieces by the cavalry returning from the pursuit. Even now the first line of the enemy's left wing scorned to break and fly strove to retreat in good order, but Lake could now turn his whole force against them, and cutting off their retreat, broke the column after a most determined resistance. Of the 17 battalions... known as the Deccan Invincibles... barely 2,000 remained to be disarmed and captured, the remainder lying on the plain in thousands, dying or dead, with most of their comrades of the horse. The British total losses amounted to 824 casualties, of which about one-third were European.

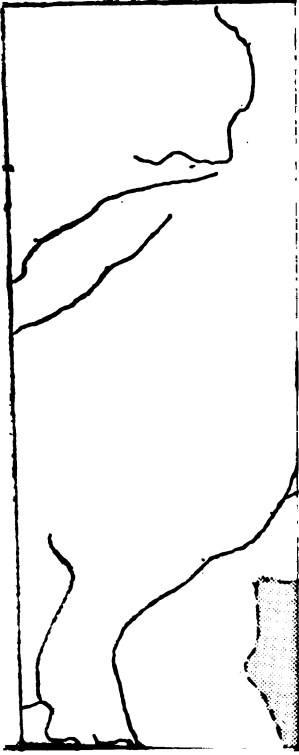
So ended the fateful battle of Laswarrie, which finally crushed the power of Scindia. Defeated in the Deccan, in Hindustan, and in Cuttack; he like Bhonsla, was forced to sue for peace.

PEACE.

On the 30th December 1803, he signed a second treaty, yielding all his country between the Jumna and the Ganges, all that between the Ajunta Hills and the Godavery, and the forts and districts of Ahmadnagar and Baroach.



Scale ,



While both he and Bhonsla engaged themselves never to employ **any** subject of **any** power that should be at war with England.

The Treaties of Peace with Scindia and Bhonsla having been concluded, the British, whose prestige was never higher, prepared to move into winter quarters. And so ended two victorious campaigns and the first phase of the Mahratta War ; although the contest was not yet finished.

There remained Holkar, the last important Mahratta, who up to the present had remained inactive ; but the year 1804 had hardly commenced, when this prince now believed himself capable of flouting the British Raj. But although the war was destined to re-start and continue until 1806, the two most powerful antagonists were out of the lists.

THE LESSONS OF THE MOROCCAN WAR

(1925-1926).

WITH REGARD TO AVIATION.

Extract from "Revue Militaire Francaise," 1st February 1928.

The Doctrine of Employment.

Our army not long ago carried out two very difficult campaigns in Morocco in 1925 and 1926, during which the air service was able to play a prominent part and to assume a more important position than was anticipated by the Higher Command.

The lessons which may be derived from this experience for the conduct of a colonial war, are of interest.

However difficult it is to generalize the lessons of a war, for each war has special characteristics, the question arises to what extent these lessons of the Moroccan war are applicable to a European war.

The first condition is in peace time to have as far as possible, a perfect balance between the objectives to be attained, the armament to be constructed and the units to be formed and for this purpose, the doctrine to be followed to employ them to the best advantage. This is specially important when it is a question of the air service, a new arm, the evolution of which is as rapid as the progress of its armament.

It is true that the armament of the air service in Morocco and the composition of the units were very much the same as in 1918. As the lessons bearing on this point are therefore comparatively few, we will reserve them for a future article.

The lessons concerning the doctrine of employment are on the contrary, important, and deserve immediate attention.

The development of the air service has been and still is so rapid, that it has not been possible to establish any very definite doctrine for its employment ; in fact we are often forced to deviate from the official doctrine into somewhat new channels.

It is therefore interesting, after practical tests, to define the methods of employment of this arm which enable it to render the most useful services. Moreover we will only emphasize the lessons which concern the general organisation of the army and the conduct of a battle by all arms, to show finally, the place of primary importance which must henceforward be given to the air service in a really modern army.

1.—THE INITIAL CONCENTRATION.

Necessity for a new scheme.

It is interesting and instructive to show according to what scheme and in what length of time the initial concentration of the units was carried out.

That rapid concentrations are required by the air arm, an arm which lends itself admirably to forming a protective curtain, may be taken as axiomatic. This rapidity was especially desirable at the time of the Riff aggression.

It will perhaps suffice to show the slowness with which certain concentrations of air units were carried out, to realise the necessity of assuring henceforth, by a new scheme, a much greater rapidity in concentrations of air units.

We will moreover put forward a new scheme which can be carried out immediately.

1. *Scheme of air concentration and time taken in execution.*

Concentration of air units in Morocco.

It was on the morning of April 27, 1925, that the Riff offensive took place, by the attack of our posts on the Middle Ouergha.

On the morning of the 27th the Ouezzan squadron arrived at Ain Doridj on the Ouergha, the Meknes squadron arrived at Fez ; thus on this first day, the 6 squadrons of the Northern Front were in action at Taza, Fez and Ain Doridj with all their resources.

On the 28th the situation appeared more serious ; each of the four squadrons in the south received warning orders to be prepared to send *without delay*, to the above mentioned bases, a flight of 3 army co-operation planes and 2 troop carrying planes (limousines) (for the transport of the mechanics), that is to say one half of the aeroplanes of the squadron.

On the 29th the executive order was sent and *this concentration was carried out at once.*

Concentration of the Algerian and Tunisian Squadrons.

Scheme—On this date, in accordance with orders previously received, 2 Algerian squadrons (1 from Algiers, 1 from Setif) had already started for Morocco.

On May 2, four other squadrons from Algeria-Tunisia were ordered to proceed to Morocco (from Oran, Algiers, Setif, Tunis), as well as the staff and the park of the 3rd Algerian Air Group (Setif).

These squadrons were to bring a larger personnel and M. T. equipment than those normally at their disposal; owing to this fact certain units were only sent after receiving reinforcements from France.

As is the rule, the movement of the flying portion of the unit was combined with the M. T. echelons, as the flying portion does not carry either all the personnel or all the materiel indispensable to the unit for taking the field.

Time taken—Finally, the *concentration order* being given on the 2nd or 3rd May, the following were the dates of departure and arrival of the main body of the squadrons (M. T. echelon).—

	Remark.	Date of departure.	Date of arrival.	Duration of movement.	Time since the 3rd May.
1 squadron from Algiers	These squadrons had already started before the Riff attack.	26 April.	3 May.	7 days.	
1 " " Setif		27 "	5 "	9 "	
1 " " Oran ..		4 May	8 "	4 "	5 days
1 " " Algiers ..		14 "	22 "	8 "	19 "
1 " " Tunis ..		15 "	29 "	14 "	26 "
1 " " Setif ..	..	29 "	10 June	13 "	37 "

Concentration of the squadrons coming from France, Bréguet squadrons.

Scheme—On the same date, 2 squadrons from Metz, 11th Bombing Regiment, also received orders to proceed to Morocco. They also were raised to a higher establishment. The personnel and M. T. echelon arrived by ship, the flying material had to be provided and assembled by the Moroccan air service.—

Time taken.

	Departure from Metz.	Arrived at Casablanca	Duration of journey.	Time for assembling the aeroplanes.	Time since 3 May.
2 squadrons of the 11th air regiment, Metz.	10 May	19 May	10 days	8 days (19 May—26 May).	23 days.

Concentration of a troop carrying (gros porteur) squadron from France.

Later, in August 1925, the Minister decided upon the despatch to Morocco of a Farman-Jupiter naval squadron ; 5 B 2 squadron with 6 troop carrying aeroplanes.

Scheme—The scheme in this case is different owing to the carrying capacity of the troop carrying aeroplanes.

The flying portion carried all the personnel and materiel indispensable for immediately taking the field, if this was necessary ; the remainder arrived by boat, the M. T. echelon being however, organised on the spot by the officer commanding the Moroccan air service.—

Time taken.

	Departure from Guers.	Arrival at Alicante.	Arrival at Casablanca.	Time taken.
1 Farman-Jupiter squadron, Guers-Pierrefeu.	27 August 6.15	27 August 13.45	28 August 18.15	26 hours

2.—*A new scheme is essential.*

The causes of delay.—The reinforcement of the squadron in personnel and materiel preceding and delaying the movement of concentration.

The squadron (with the exception of the aeroplanes and the navigating personnel) travelling by road ; such are the causes of the delay in the air concentrations, which must be overcome.

This is now possible.

How they can be overcome.—We have now a practical instance that a squadron can operate in the field and carry out normal work for one and if required, two weeks, provided that, in addition to its navigating personnel, it has at its disposal about 25 non-flying personnel* and a light working equipment.

Moreover, as we can transform the army co-operation plane (Breguet) into a transport plane, temporarily and immediately, a Bréguet squadron, provided with 2 ambulance planes, or temporarily even reinforced by 2 first reserve aeroplanes, can transport its entire personnel and the stores and spares indispensable for its functioning for one or two weeks (†).

* This was a normal occurrence in Morocco, and for a period of several weeks.

† It is sufficient, if the squadrons find equipped landing grounds every 125 miles, and on arrival at their base, are temporarily allotted one light car for liaison purposes, and one or two lorries for supplies.

An independant first echelon entirely air transported can therefore be formed, able to go into action without waiting for the arrival of the 2nd echelon or M. T. echelon, which moves slowly, like all things on land.

3.—*Application to North Africa.*

This new scheme is obviously applicable to the concentration in North Africa of the squadrons from Algeria, Tunisia and Morocco. With regard to the squadrons sent from France, in case of need, these should be troop carrier squadrons to which, even in this case, the same scheme would be applicable since it has been definitely carried out.

The time taken to effect concentrations under the new scheme are compared, in the following table, with those which were necessary in 1925 :—

	Squadrons from Oran.	Squadrons from Algeria.	Squadrons from Setif.	Squadrons from Tunis.	Troop carrying squadron from France.
Concentration as carried out.	5 days	1st 7 days 2nd 19 days	1st 9 days 2nd 37 days	26 days	36 hours from S. of France.
New scheme	2 days (if necessary 1 day)	3 days (if necessary 2 days)	4 days (if necessary 3 days)	5 days (if necessary 4 days)	Ditto.

It will suffice to recall the situation in Morocco during the first days of May 1925, to estimate the advantages which the application of this new scheme would have had and which it presents under all circumstances for the security of Morocco and North Africa.

4.—*Generalization.*

Is this method of concentration applicable to all air squadrons and to a concentration on the frontiers of France ?

It is certainly so for the squadrons, the aeroplanes of which have a sufficient capacity, that is to say for all, with the exception of fighter squadrons and certain special long distance reconnaissance squadrons. Even these exceptions could be overcome by putting two or three requisitioned commercial transport aeroplanes at the disposition of such squadrons.

Again, air force units will concentrate like the corps of the covering force ; whatever their station in peace time, they will start

without delay, flying to the frontier with their first echelon, which will be rejoined there, several days later, by the second or M. T. echelon.

To sum up, on mobilisation the whole air force will take the field *almost immediately*.

In fact, the concentration and deployment on the frontier of all the home air force can be effected in 2 days, that of the troop carrier aircraft from Africa in 3 days, on the one condition that atmospheric conditions are favourable.*

If it is true (and that we can judge further on) that the air force is the best covering arm, the advantage to be gained by carrying out the proposed new scheme is self-evident.

II.—MANOEUVRE.

Temporary and immediate concentrations of aircraft.

This scheme applies not only to the initial concentration and to the first deployment of air forces, but it can be applied and with even greater success, for temporary concentrations during operations, and moreover, it is chiefly thus that it has been put into practice.

It was necessary to make extensive use of the manœuvring capacity of the air forces, especially as the forces available were most inadequate, and as the enemy at first had the initiative in attack. Those are the two characteristics of the situation during the first months of the 1925 campaign.

We will therefore refer to this period in order to show to what point the application of the principle of concentration by developing the mobility of air forces has been pursued, and to what extent the new scheme proposed above would increase the manœuvring capacity of the air units.

1.—*The movements of air units in 1925.*

The disposition of the troops and of the air forces at the beginning of the 1925 campaign.—The mobile troops were distributed into three groups, then into three sectors, left, right and centre of the northern front.

* Of course, this is assuming there will be lines of communication and concentration bases prepared and supplied.

With regard to the troop carrier planes coming from Africa, this is assuming that they will land in Corsica for petrol supplies and will be fitted with floats for crossing the Mediterranean.

Moreover, the same procedure could be applied to two-seater aeroplanes. Thus it would be possible to increase the air forces in North Africa without denuding our frontier air forces on mobilisation by an equivalent amount.

1. The first part of the document is a list of names and addresses, which are arranged in a columnar format. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list is organized into two main sections, with the first section containing names and addresses, and the second section containing names and addresses.

2. The second part of the document is a list of names and addresses, which are arranged in a columnar format. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list is organized into two main sections, with the first section containing names and addresses, and the second section containing names and addresses.

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substantial increase in the amount.

A small air group was placed at the disposal of each of them and the main body of the air force was in reserve in the centre sector. The air group of the centre sector and the reserve were on the same landing ground at Fez, owing to the insecurity of the whole centre region, where however, an advanced landing ground on the Ouergha was used, whenever the mobile column was able to assure temporarily its protection.

The mobile columns were periodically obliged to attack, principally in order to go to the assistance of some post ; in this case, they sustained heavy casualties, but it was a fact that the allotment of strong air support reduced these considerably. Therefore, the higher command wished to arrange as far as possible for the attacks of the mobile columns to take place one after the other, in order to enable the air commander to concentrate on each occasion, the main body of the air units to help each column in turn.

The working of the air units.—This temporary concentration was carried out on the advanced landing ground or on the base nearest to the zone of operations ; the squadrons moved there with the personnel and emergency stores and spares strictly indispensable for their work ; this transport was effected, either partly with one light motor lorry per squadron starting the day before, and the remainder in army co-operation and troop carrying planes (limousines) or entirely by air if the distance was too great. Naturally they found petrol, ammunition, working parties and guard duties provided on the spot.

The moves did not as a general rule take more than a day, the units returning, if necessary, on the following day. Sometimes however, they remained on the landing ground, every man and officer sleeping under the hangars, rolled in a blanket.

This also applied of course in the event of an enemy attack.

Examples.—The following is a characteristic example of these temporary and immediate concentrations :

On 21st May, from 5 o'clock, immediate concentration at Drader, an advanced landing ground on the Ouergha.

The five squadrons stationed at Fez (43 miles) arrived transporting their personnel and material, partly by road (1 lorry per squadron), partly by air.

Two squadrons came from the Taza sector (110 miles by road), transporting personnel and material entirely by air (army co-operation) planes and troop carrying planes-limousines.

Two squadrons of the left sector were also prepared to proceed there in the same manner at the given signal (they were not required.)

Petrol, bombs, wireless carts, telephone section, personnel for working parties and guard duties, were despatched the same morning, from the neighbouring supply base (Ain A'lcha) to the Drader landing ground.

170 bombardments and reconnaissances were carried out and about 30 evacuations of wounded.

At 16 o'clock the security (of the landing ground) being no longer guaranteed, the air units had to move back to their bases (Fez and Taza).

The next morning 22nd May, five of these squadrons returned to Drader to support the same troops: 3 from Fez, 2 from Taza (they carried out 63 fighting tasks and a considerable number of evacuations of wounded, and returned in the afternoon to their base), the two from Taza leaving first, as the Cambay mobile column, which had come from the Taza region to the Ouergha, was hurriedly sent by lorry to Taza, where the situation had suddenly become critical.

The next day, 23rd May, 3 squadrons from Fez went to Drader; this was the third time in three consecutive days; they carried out 50 fighting tasks, besides evacuations of wounded.

Two days after, on 25th May, 3 squadrons went again from Fez to Ain Doridj (37 miles) the advanced base of the left sector, to reinforce the 2 squadrons of this sector.

Between them they carried out 115 fighting tasks besides evacuations of wounded.

This account is enough to prove the manœuvring activity which the air forces had to and were able to display.

2.—The difficulties.

The disadvantages of this system or the reasons for which this method of employment of air forces is not in the official regulations.—Nevertheless there are difficulties in connection with these temporary and immediate concentrations since they have one disadvantage: for want of rapid means of transport, the mechanic personnel becomes split up between the advanced landing ground and the base. In consequence the reduced personnel of the advanced landing ground were forced to increase their efforts; we did not allow ourselves to be stopped by this difficulty, but one cannot deny its existence.

Moreover, in the air service, there has always been distinct hostility to this method of rapid and temporary concentrations so frequently resorted to in Morocco in 1925.

The present attitude with regard to this point is moreover, that of the war ; it appeared in the 1925 regulations which, on this subject, were expressed as follows : " whenever possible with a view to avoiding additional fatigue and to facilitate the exercise of the command, it is advantageous to make the base landing ground coincide with the working landing ground.

Unfortunately, the application of this very sound advice would have led to the suppression of this mobile activity, which enabled the air force in Morocco to multiply its missions and to obtain results which often surprised the command and the troops.

3.—*The necessity for a new scheme.*

The remedy.—Here again, as for the initial concentration, it is therefore a question of eliminating the causes which, by making the air force dependant on its bases, diminish in a regrettable and inadmissible manner its power of movement.

The solution having been found for the initial concentration, it is *a fortiori* for a temporary concentration : it has been shown in the preceding paragraph.

Practical advantage of this scheme of concentrations by air.—The great advantage of concentrations carried out entirely by air, was clearly proved in Morocco.

The advantage would apply equally in a European war ; the following academic example, amplification of that which took place in Morocco, gives an idea of this.

Let us assume that five French armies have taken the field, from the Vosges to the Sambre ; the left army (V) attacking and supported on the left by the IV army, the other armies remaining more or less on the " *qui vive* " in their trenches.

Let us apply the formula employed in Morocco.

The air forces of the V army and of the left of the IV would be increased by the arrival of all the reserves, and even of constituted units from the air forces forming an integral part of the neighbouring armies, the most distant of which are no further than 125 miles away.

Therefore, while the forces of all arms are extended over a wide front, three-fourths of which passive, almost the whole of the air forces will be concentrated for battle at one point.

Nevertheless, if an attack occurs on the II army, towards Nancy for example, the air units, which have their bases in this region, could be brought back there at once if required.

This is exactly what occurred in Morocco throughout the year 1925, on a front of the same extent.

Finally, with the new scheme, the air forces would carry out daily, as should be the rule in a flying arm, the first of the maxims of war : *to assemble the maximum forces at the principal point and at the right moment* without however, ceasing to comply with another principle : *Always be prepared for any eventuality*, since the distribution existing previously to a temporary concentration can be resumed immediately.

III.—CONCENTRATION OR MANOEUVRE OF FORCES AND PERMANENT ZONES OF OPERATION.

But to the above theory another may be opposed, that which foreshadows with a view to greater efficiency the allotment of permanent zones to units.

In fact, the temporary concentrations change the zones of operation of the units transferred, break the tactical bonds or at least those bonds which are the outcome of long work in common.

Experience however, makes it possible to affirm that, if some missions can only be carried out by maintaining a certain continuity, many others are simple enough to be carried out at once, for example, all those which consist of the direct intervention against a determined zone, in rear of the enemy's forward lines.

Manœuvre, even if it does not respect the continuity of tasks, ensures thus a substantial increase of power.

Endeavours have therefore been made as far as possible, *to combine both rules: concentration of forces, permanent zones of operation*, although they are apparently contradictory.

In what degree and how can this be accomplished ?

There is in this respect a very clear difference between the beginning of the 1925 campaign on the one hand, the end of the 1925 campaign and of the 1926 campaign on the other, resulting from the amount of air forces available at the two periods in proportion to the requirements to be satisfied, and this difference contains a lesson.

1.—*Combination of the two rules : concentration of forces and permanent zones of operation.*

At the beginning and middle of the 1925 campaign, the air forces were inadequate in comparison with the services that were demanded from them, or those which they took upon themselves during this critical period.

Therefore, *as far as possible the principle of the concentration of forces by manœuvre* was applied.

At the conclusion of the 1925 campaign and in 1926, on the contrary, the air forces were adequate and the organisation of their employment was regulated so as to maintain as far as possible the *allotment of permanent zones of operations to units.*

For this purpose, on the one hand, the air units allotted for purely sector work were in greater strength than previously (all together half of the air force) ; moreover, side by side with the sector air units, a group from the general reserve worked in closest liaison with them, and finally at the centre (Fez), in third line so to speak, another general reserve group in touch with all the sectors. *

When a sector had to be reinforced, this was first carried out by the reserve group stationed with it, then by the third line group, finally, if necessary, by the reserve group stationed in the neighbouring sector, and lastly by the air units allotted to the neighbouring sector, these latter both working in the zone nearest to their normal zone. Thus all reinforcing air units knew their zone of intervention.

In short, a large concentration of forces was effected but nevertheless the permanent zones of operation were maintained to a considerable extent.

We have given, in the preceding paragraph, an example of the practical application, in very critical situations, of the concentration of forces. The following is a characteristic example of a concentration, whilst practically maintaining the permanent zones of operations normally allotted to the units.

Example—It was on May 19th, 1926, the day when the three divisions of the Marty *groupement*, outrivalling each other in dash and “punch,” and continually advancing, decided the fate of Abdel Krim.

* One can compare this working of air units with the system now accepted for the artillery :—

Groups under the command of the infantry ;
Supporting group of the corps artillery ;
General purposes group of the corps artillery ;

The distribution of the air units was that indicated above.

From the 18th and on the 19th, the maximum number of air forces were employed to assist this offensive, whilst moving air units as little as possible, and for this purpose the following were called to reinforce the air units of General Marty :

- .. the general reserve group stationed in the sector ;
- .. the general reserve group of the third line which was sent right ahead of him, to the most advanced landing ground of the Ouergha ;
- .. the nearest air group of the neighbouring sector, in all 12 squadrons working with the Marty "*Groupeement*," out of 15 squadrons distributed on the northern front or four-fifths of the air force, and that by transferring only one unit to bring it nearer to the front. (Fez group transferred to Ain Alcha).

2.—*Lesson.*

The differences in the situations and in the movements of the air units as shown in 1925 and 1926, contain a lesson.

The larger the force and the better this force is distributed, the easier it is to effect a concentration of all necessary units at a vital point, whilst maintaining to a certain degree the permanence of the zones of operation.

Nevertheless, there will always be cases when it will be necessary to choose between these contradictory rules and in the air service more than any other, and especially when operating on an extended theatre it must never be forgotten that the one governs the other.

It is necessary *above all* to ensure the participation of *the maximum forces in battle*, as this may decide the issue of the campaign, as was the case in the battle of May 19th.

3.—*Generalization.*

In a European war, events would occur chronologically in the same manner.

At the beginning, the strength of the air forces at our disposal would be quite inadequate for the numerous tasks to be carried out. It would be necessary as in 1925, to apply the principal of the concentration of forces at the vital point and to ignore the recriminations of the commanders at whose expense it would be carried out.

But, and this should be remembered, these recriminations do not arise when, as in 1925, these subordinate commands each in their

turn, at difficult moments, find the units thus concentrated coming to their assistance and being placed under their orders.

Later, after many months, when, by the formation of new units the air forces will have become more numerous, more attention can be given to the better results assured by the permanent allotment of zones of operations : increase for this purpose the organic air forces of the higher formations, and respect to a greater extent the organic ties and make the reserves more flexible and reduce their movements.

Nevertheless, it is during the first months of the war, when the air units will be few, that the issue may be determined by the results of the battles. There is here another reason, and an important reason, for organising the mobility of the air service, since by *manœuvre*, its efficiency will be greatly increased.

IV.—CONCENTRATION OR MANOEUVRE OF THE FORCES.

THE UNITY AND THE CONTINUITY OF THE COMMAND.

The concentration of forces leads however, unless care is taken, to the neglect of another first principle : the unity and the continuity of the command. The higher command has a natural tendency to place in general reserve and to keep under its direct orders a great number of units, instead of placing them under the orders of those actually fighting the action. Therefore the air forces engaged in the battle are no longer under one commander.

Endeavours should be made to avoid committing this error.

1.—*The combination of the two rules.*

In 1925, from the fact that the general reserve was very large in proportion to the sector air forces, and that moreover, the commander of the air service was necessarily well acquainted with the situation in the three sectors and in close liaison with each of the generals commanding a sector, the commander of the air service took command of all the air units which at important moments were concentrated for the benefit of any one sector, the commander of the air units of the sector acting as his second in command.

At the end of 1925 and in 1926, it was otherwise ; the air units in each sector were commanded by a Lieutenant-Colonel and he automatically assumed command of the air reinforcements which took part, even temporarily, in the operations of the sector : the commander of the air service only took over the command himself, if the main body

of the reserves intervened in these operations and he then combined his battle H. Q. with that of the commander of the sector air units.

Thus in the first as in the second instance, the unity and the continuity of the command were assured.

2.—Generalization.

The generalization of the system set forth above will lead to the setting up in each army of a strongly organised air force H. Q., with commanders of sufficiently senior rank to be capable of assuming command of the largest constituted formations formed from the general reserves. On the other hand, the Chief of the air service should be the executive commander, not only of the general reserves, but of the entire air service. In the event of almost all of the reserves being allotted temporarily to an army or group of armies, the unity and continuity of the command will only be maintained if he takes over the command of all the air forces either of the army, or of the group of armies.

V.—THE AIR SERVICE AS COVERING FORCE.

At no time are concentrations and rapid movements, as well as a single command, always in operation and with effective influence over the entire air service, so indispensable as during the period of action of the covering force.

At no other time can the air service, independently, render greater services. The beginning of the Riff campaign affords an obvious proof of this.

1.—Employment of the air service as covering force at the beginning of the 1925 campaign.

The situation of the covering troops before the sudden Riff attack—
The situation in April, May and June 1925—

.. our northern front, from the Aoudour to the Leben, was forced and over-run by the enemy:

.. the posts were surrounded and attacked:

.. mobile columns were hastily assembled and, although inadequately constituted, went to the assistance of the posts, reassuring the tribes who had remained loyal and protecting them to the best of their ability against the invader:

.. reinforcing troops arrived very slowly, owing to the form and extent of our possessions in N. Africa, the poor capacity of the communication arteries connecting Algeria-Tunisia with Morocco, and the time required for transport between France and Morocco.

The task of the air service.—The air service in Morocco, immediately concentrated on the northern front with its main body at Fez, was, in fact, the most important of the covering forces. It had simultaneously :

.. to watch the posts, connect them with the command, prevent their bombardment, keep them supplied and give them material and moral support :

.. to reconnoitre the enemy forces on the principal directions of attack :

.. to oppose the advance of the dissident bands, who had crossed the line of posts and who were planning a march on Fez from several directions :

.. to proceed in a body to the support of each mobile column whenever they were in difficulties, that is to say whenever they moved, and the mobile columns often had to move in order to carry out their own protective rôle.

Results.—The air service called the roll of the posts every day, morning and night, kept the higher command informed as to their situation (reserves of water, ammunition, strengths, losses, etc.). It weakened the enemy pressure around them or around troops which had been surprised and often prevented their capitulation or their annihilation (Combes battalion, posts at Aoulai, Ain Maatouf, etc.,). For these services it received, as was natural, grateful expressions of recognition.*

It inflicted heavy losses on the dissident bands who advanced beyond the middle Ouergha and the upper Ouergha, through Fezel Bali, Drader and Tissa, or the Leben towards Fez; † the latter now only dared to continue their advance at night, and retired in the morning or dispersed, in order to escape from enemy pursuit.

It gave the fullest assistance to any mobile column in difficulty ; several of the latter acknowledge themselves that it was due to the air service that they did not sustain losses or heavier losses, or even attribute to it the success of the day.

* Which we recall only to give an idea of the results obtained. Example, those of : Commandant Combes, notwithstanding that a bomb unfortunately wounded 9 men ; Capt. Duboin, defender of Aoulai ; Commandant Richard, defender of Maatouf ; Capt. Georges, etc.

† A special study has been made by Captain Lechères, of the 37th air regiment, and forwarded to the staff of the Army at their request.

Finally, Marshal Lyautey summarizes his impression by saying à propos of this period : " It was the air service which saved Fez."

And nevertheless, in spite of great fatigue, and notwithstanding the extraordinary effort demanded from the personnel or that to which the material was subjected in order to attain such a result, the work of the air service continued from the end of April, through May, June and July.

2.—*Lesson.*

Lesson.—It would appear therefore, that the air service is a covering arm with infinite possibilities, that it is undoubtedly the most effective, owing to the moral results it obtains, because it delays and disperses the enemy, as soon as it locates them for this reason finally, that, by its great mobility and its radius of action it can concentrate instantaneously at the point where it is of the greatest importance to check the invader.

À propos of the covering force in Morocco, we will recall to mind the ideas of Marshal Bugeaud on the occupation of a frontier zone in Algeria :

" I know nothing more deplorable " he stated to Parliament " than the system of multiplying entrenched posts. It will lead to an exaggerated increase of our army."

" Between an occupation limited by the entrenched posts and mobility, there is just that difference which exists between the range of the rifle and range of legs. The entrenched posts command the country only within the range of a rifle whilst mobility commands the country for 15 or 20 leagues."

To-day however, the radius of action and the mobility of the air service command the country at a very much greater distance.

It can be said, it is true, that the air service alone cannot command a country, *but the air service and the same air service would be able simultaneously, if it was sufficiently numerous, to transport certain troops of all arms, then to intervene directly in advance of them and in liaison with them.*

3.—*Application and generalization.*

In Morocco.—We are therefore convinced that, based on the lesson of 1925 and on the ideas of Marshal Bugeaud, *in Morocco an extensive air service would constitute a covering force and occupation system*

*superior to that of a line of posts. Moreover the two systems do not exclude each other, quite the contrary ; nevertheless, if protection is visualized according to Marshal Bugeaud, the principal system to-day could be protection by the air service.**

In a European war.—But in a European war ? The problem is much greater, the solution more complex and it is impossible to generalize.

However, even merely considering their employment in liaison with other arms, it can be stated that the possibility of transporting and engaging strong air forces at very great distances and very rapidly make this arm, even in the setting of a European war, the most valuable covering force which one can have.

It will considerably increase the defensive power of a fortified front held by still fairly weak forces of all arms.

It will increase in the same proportion that of a main body of cavalry and supporting troops having a covering mission in open country or fighting a delaying action as a Belgium in 1914.

* This however requires an explanation. In our opinion, no military covering force is really effective in Morocco. A line of posts or air bombardments as reprisals cannot prevent bands of plunderers or fanatics from coming by surprise to attack and raid our loyal tribes, from attacking our dépôts or supply convoys, harassing and surrounding the posts, or setting ambushes.

There is only one way : the occupation of the country.

What is required is to conquer and consolidate rather than protection.

However if there is in any part a front which can only be held by covering troops it is necessary to maintain strong forces ready for intervention without delay.

In Morocco, a situation should not have to be retrieved since events develop very quickly from bad to worse (as in 1925) ; the important point is to prevent the situation from becoming serious.

But for this, reserves behind the posts are necessary and this is impossible without an undue increase of the army.

And it is there that the superiority of the air force is obvious ; even when stationed in the centre of Morocco, its reserves are able to intervene immediately themselves and with troops transported by them.

MILITARY NOTES.

AFGHANISTAN.

TURCO-AFGHAN TREATY.

A Turco-Afghan treaty of friendship and economic co-operation was signed at Angora on 25th May, during the visit of the King of Afghanistan.

TREATIES.

In addition to the other treaties concluded during the King's tour, a Treaty of Amity between Afghanistan and Japan was signed in London on 4th April, 1928, and a similar treaty between Afghanistan and Egypt was concluded in June. Both treaties provide for the reciprocal establishment of diplomatic missions, and pledge the Governments concerned to enter into negotiations for the conclusion of commercial agreements.

ARABIA.

SOUTH-WEST ARABIA.

As a result of the conversations which took place at Taiz during April between the acting Resident at Aden and the local Zeidi commander, negotiations are now under way for the conclusion of a definite agreement between His Majesty's Government and the Imam.

In order to avoid protracted discussions His Majesty's Government have propounded a brief preliminary treaty which provides for—

- (a) British recognition of the Imam's independence ;
- (b) Recognition by the Imam of the Aden Protectorate frontier and
- (c) A promise to the Imam of such assistance as His Majesty's Government can render him within the limits of their international obligations.

It is proposed that other outstanding questions should be regulated by a subsequent and more detailed treaty to be negotiated at a later date, after the Imam has actually evacuated his present encroachments into the Aden Protectorate.

In order to give the Imam time in which to deliberate these proposals the present truce has been extended up to 17th July, on

condition that the Zeidis withdraw from Dhala by 29th June as an earnest of the Imam's good faith.

Air operations against the Zeidis continued daily during the first fortnight of July. Considerable damage appears to have been done to the Imam's barracks, W/T stations and other objectives, and on several occasions it was reported that Zeidi troops were caught in the open by machine-gun fire.

The enemy moral appears to have suffered considerably from these attacks, and that of the Protectorate tribes to have been proportionately enhanced. As a result the Koteibi tribe, one of whose sheikhs was kidnapped by the Zeidis in February, after capturing various outlying Zeidi posts, seized Dhala on 14th July, and ejected all the Imam's troops from that portion of the Protectorate.

Since the capture of Dhala bombing has been suspended, and an opportunity is being given to the Imam to re-open negotiations for a friendly settlement.

NEJD.

Sir Gilbert Clayton, after receiving further instructions from His Majesty's Government, left England on 19th July to resume negotiations with Ibn Saud at the latter's summer headquarters at Taif.

BELGIUM.

NOTES ON MILITARY REVIEWS.

"BULLETIN BELGE DES SCIENCES MILITAIRES."

May 1928.

Published by l'Institut Cartographique Militaire, Brussels.

Price, 3.50 francs.

1. *Operations of the Belgian Army during the campaign 1914-1918.* (Continued).

Battle of the Yser—30th October, 1914.

On 30th October the German "Fabeck Group" undertook an offensive against the Ypres salient; its mission was to break through the allied front between the 4th and 6th German armies, an operation in which the 4th German army, who had been set a similar task between the sea and Ypres, had failed.

In support of this operation, Rupprecht of Bavaria ordered the right and centre of the 6th Army to continue its offensive so as to hold the enemy. The Duke of Württemberg also ordered a general offensive on the part of his troops on 30th October.

These operations were expected by the German Higher Command to bring about the defeat of the Belgian army on the Yser.

The chapter next deals with the French and Belgian operations in the sector between the sea and Dixmude, held by French and Belgian troops, the former under General Grossetti. The dispositions and allotment of frontage of these troops is given on pages 386-387.

On pages 388-392, the actions on the fronts of the 2nd, 3rd, 4th and 6th Belgian Divisions are described in detail; the operations resulted in the retreat of the Belgians along the railway between Dixmude and Nieuport and the occupation of Ramscapele by the Germans, on the front of the 2nd Belgian Division.

South of Dixmude, the operations carried out by the French troops under General d'Urbal and the British troops under Sir Douglas Haig, are described on pages 392-394. Heavy fighting took place on 30th October, both on the French and British fronts. The French Force under General de Mitry lost Bixschoote, and the British commander was forced to call on the French for reinforcements, which were sent.

On 30th October, the "Fabeck Group" launched its attack against the British troops in the salient between Gheluvelt and Messines, where the Germans succeeded in advancing to a maximum depth of 3 km. on one portion of the front, whilst at others the German attack was stemmed.

The decisions of the Belgian Higher Command, as the result of the German offensive on 30th October, are given on pages 394-395. The question of the preparation of a second line of defence, Coxyde—Furnes—Loo Canal—Poperinghe Canal, to which the army could fall back, was considered.

The chapter ends with an account of the progress of the inundations during 30th October: on this day the inundations had spread to the environs of Pervyse, and had rendered many of the German positions, as well as Belgian and French positions between the railway line and the Yser, untenable.

During the day the flooding of the country was increased by opening the lock gates at Furnes.

2. *The rôle of the Field Army and of the Belgian Fortresses in 1914.* (Continued). By Lieut.-Colonel Duvivier and Major Herbiet. Of special interest. Part 3.

This is an exceptionally interesting account of the work of the Belgian Field Army and of the fortress of Liège at the outbreak of hostilities. The narrative proves that the fortress fulfilled the tasks which were expected of it, *i.e.*—

- (a) Covering the mobilization and concentration of the Belgian Army.
- (b) The task of reconnaissance by divulging the German plan of attack.
- (c) The task of holding up the German Army and forcing the enemy to deploy, and engage a powerful army for a seige, thus hindering the proper utilization of the 1st and 2nd German Armies on the left bank of the Meuse.
- (d) The great moral effect on the Belgian Army of the gallant resistance of the fortress.

The Liège Fortress held up the German armies charged with its reduction from the 4th to 16th August.

The Fort of Barchon fell on 8th August;

The Fort of Evegnée fell on 11th August.

The remaining ten forts fell at varying dates between 12th and 16th August, when subjected to the fire of 420 mm. howitzers.

Loncin, the headquarters of General Leman, held out longest and fell on 16th August, after a bombardment by 420 mm. howitzers, which began on 15th August at 4 p.m. After the 25th round the fort was blown up.

3. *The Approach March.* By Colonel Hans. Of interest.

This article suggests that for the various component formations of an army to be employed to the greatest advantage in action, it is indispensable that they should arrive on the field intact and grouped in such a way, that on coming into action will demand the least possible expenditure of moral and material energy.

If the units composing the force are physically worn out by fatigue and privations, and by the lack of safety and protection measures, it

is certain that value of the fighting force will rapidly diminish before the psychological moment for launching the attack.

During the forward movement to the battle area, the army must therefore be constantly kept united; its higher formations must always be in possession of all their fighting requirements; commanders of all ranks must only call upon their commands for such efforts as are really necessary, and at the same time must continually look after their well being and protection.

Instances from the Great War are given to prove the truth of the author's theories.

4. *Weapon Training Instruction.* By Lieut.-Col. Demart.
Of interest from the point of view of conscript armies only.

This article deals with the difficulties of weapon training in short service armies, such as the Belgian Army, where service according to the various arms ranges between 10 to 12 months.

The instructions referred to includes:—

1. Rifle or carbine.
2. Light automatic.
3. Revolver.
4. Grenade.

The writer deals in detail with the various lessons in numerical order which he considers suitable for a conscript recruit. All the principles involved are contained in our own Small Arms Training, and there is little to be learnt from them.

The article contains a table for suitable monthly instruction from the 1st to the 10th month of the conscript's service. Also an illustration of a panoramic target for describing fire orders.

5. *Tanks.* (Continued). By Major Liévin.

In this article the writer continues his criticism of tank requirements in war, and deduces what he considers are the minimum requirements of tanks of accompaniment, which he classes under the following headings:—

- | | |
|-----------------|--------------------|
| 1. Light tanks | } (pages 455—456.) |
| 2. Medium tanks | |

He next deals with the tanks of accompaniment now in use or undergoing trials in the French army, i.e., the light Renault tank

and the British made Mark V* tank which rendered valuable services during the war. It is now looked on as slow, heavy, very vulnerable and obsolete, and is therefore not described in this article.

A technical description of the Renault tank is set out at great length with illustrations on pages 457—471.

With a view to lessening the vulnerability of the Renault tank by an increase in its speed, there is under consideration a plan to replace the caterpillar system of propulsion of metal caterpillars by a special propelling system called the Kegresse propeller, supplied with supple india-rubber caterpillar traction. The Renault Kegresse tank is described on pages 471—473.

The new Renault N. C. model 1927, a new type of light tank under construction in the Renault works, is described on page 473.

BRAZIL.

THE ARMY IN 1927-28.

(1) *Army Budget.*

The estimated expenditure on the Army for 1928 compared with the actual expenditure in the two preceding years is as follows :—

—				Paper milreis.	Approximate sterling equivalent.
1926	..	..	..	195,926,531	£4,920,663
1927	..	..	..	220,613,529	£5,537,838
1928	..	..	..	254,632,428	£6,388,311

Estimates for current year, therefore, exceed expenditure for the previous year by about 13½ per cent. This increase is fairly generally distributed among the various items. The most noteworthy increases are in the appropriations for war stores, the supply services, remounts, and aviation. The last-named item appears for the first time in the budget, indicating the inception of the Air Arm, the formation of which had been in abeyance, although Congress had given official sanction in 1926.

(2) *Defence Organization.*

A Council of National Defence was set up in November, 1927. Its constitution and functions resemble closely those of the Committee of Imperial Defence in the British Empire, except that the Ministers most concerned with defence matters and the Chiefs of Staff are permanent members of the Council.

(3) *Establishments.*

Establishments for 1928 are fixed as follows :—

Officers	..	..	..	5,106
Other ranks	..	..	..	41,683
Animals	..	..	..	19,542

These figures show an addition to the establishment of 10,000 N. C. O's. and men. No alteration in organization is thereby involved ; the additional numbers will be utilized in order to supplement the strength of a number of units which have hitherto existed mainly on paper.

Theoretical provision is made for the mobilization of five infantry divisions and five cavalry divisions and one mixed brigade, but in practice only a small proportion of this force could, it is reported, materialize.

(4) *Training.*

The French Mission is responsible for the production of training manuals, all of which have recently been revised. In consequence, French doctrine permeates the whole army.

No manœuvres or training of reserves took place during the past year.

(5) *Armament.*

The re-armament of the army with French-made Hotchkiss machine guns is stated to have been completed. Although the gun forms an awkward load, it is generally popular in the army. The pack saddlery on which all guns are carried is said to be good.

No important purchases of artillery were made during the year.

Considerable progress was made with the shell manufacturing plant in the Ordnance Factory at Rio de Janeiro. Shells are now being produced from bar steel, which is at present imported but which will soon be manufactured in quantity at San Paulo. Brass cartridge cases are also manufactured and repaired.

The government explosive factories now produce all army requirements and sell a considerable surplus to the trade.

All small arms ammunition is made locally.

(6) *States Forces.*

The above report refers only to the forces maintained by the Federal Government. In addition, each State in Brazil, with a very

few exceptions, controls a "Police Force," trained and organized on military lines, and commanded by an officer of the Federal Army. The most recent estimate received with regard to these State Forces places their strength at about 45,000; their military efficiency is said to be not inferior to that of the Federal Army.

CHINA.

June.

THE SITUATION.

1. *Civil War.*

There has been very little fighting during the past month, but Chang Tso-Lin has been continuing his arrangements for withdrawal to Manchuria should necessity arise. These arrangements include the evacuation of heavy artillery, bulky stores, recruit depots, etc. At the same time he has moved certain good Manchurian formations southwards to stiffen his front. He now holds in some strength the line from Paoting (south-west of Peking on the Peking-Hankow railway) to Tsangchow (60 miles south of Tientsin on the Tientsin-Pukow railway) and thence to the sea. The weak point in this line is just west of Tsangchow, which is held by the unreliable Chihli-Shantung troops.

(a) *Eastern Sector.*—On the Tientsin-Pukow railway front the Nationalist advance continued and Tsinan was occupied on the 1st May without opposition. The Northern troops evacuated the town and crossed the Yellow River without, however, damaging the important railway bridge across the river.

On the 3rd May a serious clash occurred between Chinese and Japanese troops in Tsinan (see paragraph 2); as a result of this the Japanese occupied the railway bridge over the Yellow River at Tsinan and prevented Nationalist troops using it. A few thousand Nationalist troops did, however, cross the river on foot west of Tsinan, by means of pontoon bridges, but without the railway they have made but little progress.

At the end of April, Feng was reported to be approaching Tsinan, south of the Yellow River, hoping to get there before Chiang Kai-Shek. He was, however, unable to make progress in this direction, but, early in May, he launched a new offensive north of the Yellow River in the general direction of Tientsin. His force is said to have consisted mainly of cavalry. By the middle of the month

he had reached the Tientsin—Pukow railway at Techow (60 miles north of Tsinan). By the end of the month he had made further progress northwards and was in touch with the Northern troops at Tsangchow and to the west. No fighting on this front of a serious nature had taken place up to the end of the month, but an attack by Feng on a large scale was then apparently in preparation.

(b) *Western Sector.*—On the Peking-Hankow railway no fighting of importance has taken place during the month, but Chang Tso-Lin has withdrawn and is now concentrated in the Paoting area. As soon as he evacuated Chengtingfu, Shansi troops occupied this railway junction and followed up the retreating Northerners. Some minor fighting has taken place a few miles south of Paoting, in which the Northerners appear to have been successful.

(c) *North-western Sector.*—There has been no fighting on the Peking—Kalgan Railway, but the bulk of the Northern troops have been withdrawn from Kalgan. The Shansi troops do not appear to be following them up in any strength. The arrival of a number of Russian agitators in Kalgan is reported.

2.—*The Tsinan Incident.*

For the first two days of the Southern occupation of Tsinan all was quiet in the town, but at 10 a.m., on 3rd May parties of Southern soldiers began looting the houses of Japanese residents. A small party of Japanese soldiers was sent to stop the looters, but the latter fired on the Japanese, who thereupon replied, and fighting spread rapidly. In the course of the next few days a number of Japanese civilians were murdered, in many cases after being mutilated. There were upwards of 50 casualties amongst the Japanese troops before the rising was finally quelled on 10th May. The outbreak appears to have been pre-arranged, probably by Communist inspired agitators, although, once it has started, the Chinese troops got quite out of hand and orders issued by their own leaders were not carried out. The Japanese, therefore, had to take action themselves in order to clear the Chinese out of the town. To do this they were forced to use artillery in addition to rifles and machine guns. The number of Chinese casualties is unknown, but was very considerable. Since 11th May the city has been quiet. It is interesting to note that the 40th Chinese Army, responsible for this incident, was the same army that carried out the Nanking outrages of March, 1927. As a result

of this incident the Japanese held the railway bridge over the Yellow River at Tsinan and refused to allow the Nationalist troops to cross it. Their advance towards Tientsin was, therefore, held up. The local Japanese military authorities put forward certain military demands in connection with this incident, but these have not yet been settled and at present there is no contact between the Japanese G. O. C., Shantung, and Chiang Kai-Shek.

There have been a certain number of repercussions in other parts of China, notably on the Yangtze. At Shanghai an attempt to organize an anti-Japanese boycott has met with very minor success and there have been no disorders. At Wuhu, as a precautionary measure, all Japanese subjects were evacuated from the city to hulks on the river; but no incidents have occurred. In fact, the Nationalist authorities, apart from formal protests, appear to have made efforts to localise the incident and prevent anti-Japanese troubles occurring elsewhere.

3.—Japanese attitude towards Chinese Civil War.

On 18th May the Japanese issued a manifesto, copies of which were given both to the Northern and Southern parties. In this manifesto the Japanese Government stated that they would, under no circumstances, allow inter-Chinese fighting in Manchuria. They made it clear to Chang Tso-Lin that no obstacle would be placed in his way if he marched his army back to Manchuria without fighting. They also made it clear, however, that neither a defeated Northern, nor a victorious and pursuing Southern Army would be allowed to pass beyond the Great Wall and enter Manchuria. At the time this document was handed to Chang Tso-Lin he was also given to understand that the Japanese would be very glad if he would take their advice—and the advice of many of his own Generals—and withdraw peaceably to Manchuria.

The Japanese are expected to take steps to keep open the Peking—Shanhaikwan railway. In order to do this they have already sent two reinforcements to Tientsin, the first of five companies, and the second of an infantry regiment and an artillery battalion. The latter are part of the 3rd Division, which was originally under orders for Shantung. Owing to the situation having become quiet in that province, this regiment was diverted to Tientsin. In addition, the Japanese are moving troops from the leased territory

(Liao-tung peninsula) to Chinchow, on the Peking—Mukden railway, in order to carry out their determination to prevent armed Chinese soldiers entering Manchuria in a disorganized condition.

(For further details of the despatch of these troops, see article under Japan in this Summary).

4.—*American attitude towards events in China.*

On 19th May, the American detachment guarding the American sector of the Peking—Shanhaikwan railway at Tongshan was withdrawn to Tientsin. When the crisis arose in April 1927, and there was the possibility of inter-Chinese fighting on this railway, the Americans threatened to withdraw. On that occasion the threat was not carried out. This railway is protected by an international garrison in order to keep open the communications between Peking and the sea, under the terms of the Protocol of 1901, signed after Boxer rebellion. (For a full account, see the issue of this summary for January 1925). Tongshan is important owing to the presence there of the large and prosperous Kailan mines—a Sino-British undertaking in which many millions of pounds have been invested. Some 150 foreigners live there, 50 of whom are British.

It was hoped that the Japanese, who are responsible for guarding the next sector of the railway north of the American sector, would take over the American sector but they have not done so up to the end of the month.

5.—*Split in the Kuomintang.*

During the month the leaders at Hankow declared that the action of the Japanese at Tsinan had determined them to do what they could to assist the Nationalists advance towards Peking. For this purpose a concentration of troops was effected at Hankow and it was proposed to send a force northwards to help Feng. On 22nd May, however, for reasons which are not yet clear, fighting broke out in Hankow between rival factions. The following day this fighting was stopped by the arrest of Cheng Chien, one of the leaders in the city. He will be remembered as the General in command of the troops, responsible for the Nanking outrages of March, 1927, and as such, headed the list of Chinese whose punishment was demanded. Hitherto no Chinese Government has been strong enough to arrest him. It was hoped that his troops would be peacefully absorbed into Pei Chung Hsi's forces, but they are imbued with Communist ideas and may cause trouble in this area.

At the end of the month Pei was reported to be moving troops northward along the Hankow—Peking railway, presumably to help Feng.

6.—*Situation at various centres.*

Shanghai.

With a view to ensuring co-operation in Shanghai for the preservation of order in view of the attempts to stir up anti-Japanese trouble, an *ad hoc* body has been set up. This body includes representatives of the International Settlement and the French Concession, the Mayor of Greater Shanghai and the Chinese Deputy Commissioner. There is no doubt that the Chinese authorities are anxious to avoid trouble.

The Upper Yangtze.

An anti-British boycott has been in progress during the month at Chungking. There has also been firing on British ships at and above Ichang. Sailings were temporarily suspended early in the month, but were resumed later. In some cases the fire was returned and casualties were observed. No British casualties have been reported. Yangsen remains at Wanh sien.

7.—*Use of Wei-Hai-Wei as a convalescent depot.*

The Convalescent Depot at Wei-Hai-Wei was reopened again when half of the 1st Bn. Bedfordshire and Hertfordshire Regiment left Shanghai for Wei-Hai-Wei on 16th May. The second half of this battalion left Shanghai for Wei-Hai-Wei on 25th May.

8.—*Chinese piracy.*

A British ship was pirated near Bias Bay on 28th May. The pirates took her to Bias Bay, where they landed, taking certain of the crew and passengers as hostages and a considerable quantity of loot. Shortly afterwards, a British destroyer, H.M.S. "Somme" and a Chinese Customs cruiser arrived on the scene. Both landed armed parties, whereupon the pirates fled to the hills, abandoning their hostages and most of the loot. Only one pirate was killed and he was accidentally shot by his confederates.

July.

THE SITUATION.

1.—*Civil War.*

There has been little change in the civil war situation during the past month.

The regiment of the Manchurian Brigade which was left in Peking to maintain order whilst the city was being handed over from North to South, and which was disarmed and taken prisoner by Feng, has now been liberated and has returned to Manchuria.

After the successful occupation of Tientsin and Peking by the Southern forces in June, the chief Southern commanders attended a military conference at the latter city to decide future military policy. The conference was convened by the Nanking Government, its primary object being to decide whether the campaign should be prosecuted into Manchuria.

The members of the conference first attended the Nationalist celebration of victory which was held at Peking on 6th July. The celebration was organized to announce to the spirit of Doctor Sun Yat-Sen the success of the anti-Northern expedition, which had been inspired by his political principles. Feng Yu-Hsing is said to have presented a highly "proletarian" appearance—clad in the dilapidated uniform of a private soldier, wearing a beard, straggling hair and a straw hat.

Chiang Kai-Shek is said to have wept copiously during the ceremony, an incident of which the cinematographers took full advantage.

The results of the deliberations of the military commanders are not yet known. It is, however, reported that Feng-Yu-Hsiang and Pei Chung Hsi were in favour of following up the Northern forces, if necessary, into Manchuria, whilst Yen Hsi-Shan and Chiang Kai-Shek wished to pursue a more moderate policy in view of the unequivocal Japanese pronouncement that they would not allow the civil war to be carried into Manchuria.

Up to the middle of the month a Nationalist advance into Manchuria appeared to be unnecessary. Chang Hsueh-liang—son of the late Marshal Chang Tso-lin—had been accepted by the Manchurian authorities as his father's successor after the death of the latter. He had all but made up his mind to join the Nationalists of his own free will. As soon, however, as this move became practically certain, the Japanese Consul-General in Mukden "advised" him to have nothing to do with the Nationalists, but to maintain an attitude of independence. He accepted this "advice" and the possibility of a Nationalist advance into Manchuria in order to coerce Chang Hsueh-liang at once arose.

In the face of the determined opposition of Japan it seems improbable that any serious attack on Manchuria is contemplated. The Nationalists can endeavour, however, to drive out the Northern troops of Chang Tsung-Chang, still in north-eastern Chihli, without incurring Japanese displeasure. The difficulty is that these troops cannot return to and settle down in their own provinces of Chihli and Shantung owing to the presence of the victorious Nationalists, whilst the Manchurian authorities have refused to allow them to enter that province. Their situation is, therefore, a difficult one, and their presence in the Tongshan area is a constant menace to the safety of the important Kailan Mines.

For the purpose of dealing with these Northern forces, an advance eastward of a composite force from the various Nationalist armies around Tientsin and Peking has commenced. The force consists of four army corps, two directed on Shan Hai Kwan and two directed on Jehol.

On 23rd July these corps were reported east of Yahungchiao-chen, 20 miles north-west of Tongshan and at Ku Pei-Kon, 65 miles north-east of Peking. Some fighting between Nationalist and Southern troops is reported to have occurred near the former place, but by the end of the month no change of importance had occurred in the situation.

Apart from the small advance mentioned above, the dispositions of the various forces remained substantially the same as last month.

Before the end of the month all the chief military leaders—Feng, Chiang Kai-Shek, Yen, Li Chai-Sum and Pei Chung-Hsi—had left Peking to attend the Kuomintang party congress which was due to open at Nanking on 1st August.

Dispositions of the various Chinese Forces in North China.

(i) Northern troops.

The main position of the Northern forces is on the Lan River. Two successive positions on parallel rivers respectively 20 and 40 miles eastwards, *i.e.*, in rear of the main position, are in the course of preparation. An advanced position in the area of the Kailan Mines at Tongshan is occupied by Northern troops of the Chihli-Shantung army, numbering between 30,000 and 40,000. The main position is still occupied by Manchurian troops.

(ii) *Southern troops.*

(a) Shansi troops are in occupation of Tientsin and Peking, and to the north and west of the latter city.

(b) The main concentrations of the remaining Southern troops in the neighbourhood are approximately parallel to the Tientsin—Peking Railway and roughly 20 miles to the south-west of this line. Enumerated from south-east to north-west : 3—4 army corps of soldiers of the Nanking *régime* ; Feng Yu-Hsiang's troops in the centre : the Wuhan armies of Pei Chung-Hsi, astride the Peking—Hankow Railway.

2.—*The Tsinan incident.*

The settlement of the Japanese demands in connection with the Tsinan incident has reached a deadlock, for reasons which are discussed in the article on Japan in the present issue of this Summary.

3.—*Japanese attitude in China.*

On 20th July the Minister for Foreign Affairs of the Nanking Government handed a Note to the Japanese Consular representative, in Nanking, to the effect that the Sino-Japanese Commercial Treaty of 1896 had been abrogated. The Note expressed the desire to open negotiations for a new treaty. Japan has intimated that she will not countenance such arbitrary treatment, and that she does not recognise the right of China to terminate this treaty without negotiations, provision for which is expressly laid down in the terms of the treaty itself.

4.—*American attitude towards China.*

On 25th July a new treaty was signed between America and representatives of the Nanking Government. The treaty, of only two clauses, gives tariff autonomy to China, so long as America retains at least as good treatment as the most favoured foreign nation. It is of importance on account of the fact that its signature when ratified by the Senate amounts in practice to *de jure* recognition of the Nanking *régime* as the government of China.

5.—*Situation at various centres.*

Shanghai.

No incidents of importance have occurred at Shanghai during the past month.

Upper Yangtze.

Towards the middle of July the Rear-Admiral Yangtze reported that conditions on the Upper Yangtze were better, and that as there was little firing on British ships he was discontinuing the special close naval patrol that he had detailed to deal with the situation earlier in the month.

Yangsen's troops are still in the neighbourhood of Chungking.

Chefoo.

There was an outbreak of fighting near the foreign consulates in Chefoo on 25th July between local Northern and Southern partisans. The northern forces gained the upper hand. An American landing party was put ashore, and a British gun-boat was despatched from Wei-Hai-Wei. The fighting only lasted a few hours and no damage occurred to foreign life or property.

Sinkiang.

On 7th July, Yang Tse Hsin, governor of the province of Sinkiang, was shot and killed in Urumtchi, the administrative capital of the province. Details of the outrage are not yet available.

Governor Yang, who has held office as Civil and Military Governor of Sinkiang since 1912, was generally regarded as anti-Bolshevik and pro-British. Nominally a loyal servant of Peking he was, in fact, virtually an independent and autocratic ruler upon whose personal authority has depended the stability of conditions in his province. Thus his death has removed the chief obstacle to the fulfilment of Soviet aims at penetration into this area.

6.—Threat to the Kailan mines.

The presence of a British battalion in the area of Tongshan for the purpose of protecting the Kailan mines has had a quietening effect and no incidents have occurred during the month, in spite of the proximity of several thousand ill-disciplined, starving, and unpaid troops of Chang Tsung Chang. These troops continue, however, to form a serious menace to the safety of the British and other foreign subjects working at the mines and to the mine property itself.



7.—*Foreign forces in China.*

(a) *Japanese.*

The majority of the reservists of the mobilized 3rd Japanese Division now in China have been sent back to Japan for demobilization.

(For further details see article under Japan in this Summary.)

(b) *American.*

Following the conclusion of the new treaty between China and America, it has been decided to reduce the American marine detachment in Tientsin by 1,200 men, including infantry, artillery and aviation units. The forces withdrawn will proceed to Guam.

EGYPT.

POLITICAL SITUATION.

Since the political crisis terminated on 2nd May with the postponement of the Assemblies Bill the position in Egypt has remained fairly normal. The Prime Minister, (Nahas Pasha, has been subjected to considerable criticism from all sides for his handling of the late situation, and one of his two Liberal Ministers resigned. The latter, however, subsequently withdrew his resignation, and Nahas remains for the time being in nominal control of his very uneasy Wafd-Liberal Coalition.

During the early part of the month for which Parliament was prorogued the Prime Minister, Mohamad Pasha Mahmud, made attempts to come to some agreement with the Wafd party whereby parliamentary government could continue. He failed, however, to receive adequate promise of support, and, since the meeting of Parliament would inevitably have resulted in a vote of no confidence against his Government, on 19th July he asked the King to dissolve both Chambers of the Legislature and to suspend the parliamentary *régime* for 3 years. The King complied with these requests in a Royal Decree published the same day.

Hitherto the country generally seems to have been little disturbed by these measures and, although the Wafd have tried to organize opposition, the strong measures taken by the Government have so far prevented any disturbances.

Mohamed Pasha Mahmud has outlined an extensive programme of internal reconstruction, irrigation works, etc., which, if carried out, should do much to keep the country prosperous and contented.

FRANCE.

ARMY REORGANIZATION.

According to the French Press, the following units are to be disbanded by 1st November, under the reorganization scheme :—

- 22 infantry battalions.
- 2 tank regiments.
- 6 cavalry regiments.
- 2 cavalry brigade headquarters.
- 35 artillery *groupes* and 1 battery.
- 2 engineer battalions.

The disbandment of individual battalions of different infantry regiments, and not of complete regiments, is probably due to the desire to maintain territorial recruiting connections.

NEW FRENCH MEDIUM TANK.

According to *Militär Wochenblatt* No. 36 of 1928, the Renault firm are now constructing a new tank, the *Renault N. C. Modèle* 1927.

The following details are given :—

Length	..	..	14 $\frac{1}{2}$ feet.
Weight	..	..	7 $\frac{1}{2}$ tons.
Power	..	..	60 French horse-power
Maximum speed	..	..	12 $\frac{1}{2}$ m. p. h.

Improved track, and elastic springing.

Centre of gravity near the centre of the tank, thus enabling the tail to be dispensed with.

Armour on the most exposed portions, 1·18 inches.

The outline of the tank is similar to that of the war-time Renault, which is still in service.

Reorganization of the Frontier Defences. (See Monthly Intelligence Summary, Vol. XII, No 6, April 1928, page 185.)

Notices have now been published in the French press calling on contractors to submit their names by 20th May should they be desirous of being considered for the submission of tenders for the construction of fortifications in Lorraine and Basse-Alsace. The contracts will include work on roads, 60 cm. railways, earth-works,

concrete work, underground communications, &c. The regions to be fortified will be divided into territorial strips. All the works in a strip will be given to the same contractor. The value of the work to be undertaken in any one strip may rise to about 50 million francs. Contracts will not usually include mechanical installations or the supply of cement, steel bars for reinforcement or railway material, which will be provided by the State.

An article in *La France Militaire* of 9th May states that the work of the commission will extend to the reorganisation of the Mediterranean coast defences, especially Marseilles and Toulon.

Visit of young French Officers to the Royal Military Academy.

A party of 22 young French officers from the Artillery School, Fontainebleau, and the Engineer School, Versailles, with three instructors and General Nogués, the Commander of the Fontainebleau Garrison and of the Artillery School, paid a visit to the Royal Military Academy, Woolwich, from 27th May to 3rd June.

In addition to seeing the Royal Military Academy, the School of Military Engineering and the Military College of Science, the French officers attended a number of ceremonial and social functions. On 1st June they were presented at His Majesty's levée.

French Military Attaché in London.

General Despres, the Military Attaché, has been promoted to the rank of *Generalé de Division*.

Communist activities in the French Army.

The French press reports numerous cases of communists sentenced by the courts for anti-militarist propaganda and for insulting members of the armed forces; in certain cases members of the services have successfully instituted suits for libel against communist editors, and have obtained substantial damages.

Serious efforts are being made by communist agitators to undermine the loyalty of Senegalese troops stationed in France. Propagandists visit estaminets frequented by the native troops and discuss their grievances, laying especial stress on the injustice of making the Senegalese serve longer than the French conscript: the alleged brutality of their white superiors and the probable infidelity of their wives in Africa are also fertile sources of incitement.

NOTES ON MILITARY REVIEWS.

“ REVUE MILITAIRE FRANCAISE.”

May, 1928.

Published by Berger-Levrault, Paris. Price, 5.50 francs.

1.—*The Battle of the Avre.* By Commandant d'Argenlieu.
(Part I.)

Of interest, as showing the action of the French armies on the right of the British Fifth Army in March, 1918. This instalment gives a summary of the facts leading to the formation of General Fayolle's G. A. R. on the right of the British army, the formation of General Debeney's 1st Army and his review of the situation on his arrival on 25th March. The action of the 5th French Cavalry Division on the night of 25th/26th and on 26th March, in attempting to maintain contact between the French and British armies is described. A summary of appreciations and orders issued on 26th March are given. The difficulties experienced on the arrival of the divisions to form General de Mitry's VI Corps are described.

2.—*Lessons of the Moroccan War (1925-26) on questions of Aviation.* By Colonel Armengaud. (Concluded.)

The author in his final instalment repeats some of the lessons previously drawn, notably the limitations in the powers of rapid concentrations of an air force, its mobility, its adaptability for use as a covering arm, the proportion of air units to ground units, the selection of objectives for action, and co-operation.

3.—*The Defence of the Bois de Ville and the Herbe Bois.*

(Verdun, 1916.) By Lieut.-Colonel Paquet. (Part I.)

A narrative of the action of the French units in the defence in the north-eastern sector of Verdun, February, 1916. No conclusions or criticisms of value are made in this instalment, which is only a catalogue of facts.

4.—*Landings on hostile Coasts.* By Colonel Allehaut. (Concluded.)

This instalment deals with the covering force ; landing beaches ; order of disembarkation ; phases of disembarkation ; time and method of landing ; water supply and organisation of beaches ; communications ; re-embarkation ; preliminary measures and organisation of the line of communication.

The only point of interest is the recommendation that landing should take place a hour and a half or two hours before daylight.

5.—*The last offensive of Abd el Krim.* (Issoual, September, 1925.) By General Vanbremersch.

A narrative of historical interest only.

THE NEW TASKS OF THE HIGHER COMMAND.

The following note consists of extracts and a précis of an article entitled "The new tasks of the Higher Command" by J. M. Bourget, which appeared in *Le Correspondant* of the 10th February, 1928.

The main arguments brought out in the article are that from the lessons of the past war and the present French political military situation, the author considers that the salient questions for study in connection with French national defence are:—

- (i) A war of a coalition.
- (ii) A war on two fronts.
- (iii) The correct application of the means available for the object to be attained.

"Prior to 1914, the Headquarter staff of the French Army in its preparation adhered to the hypothesis of a war on one front, and at the beginning of the war this hypothesis was proved, by events, to be correct. The maritime frontiers gave no cause for anxiety. On land the danger was definitely localised to the German frontier between the Meuse and Switzerland." The official view was that Germany would respect Belgian and Swiss neutrality; there was no subject of disagreement with Spain. There remained only Italy; Italian troops had proved mediocre in Tripoli, and so the French south-eastern frontier could safely be left to reserve units to guard.

"Even with the task simplified as above the solution adopted was defective."

"But what was more serious, was that this tyrannical conception of a single front led later to serious difficulties, especially after the Salonica expedition had been decided on. By this time G.H.Q. had usurped the power of the Government. In December, 1915, General Joffre was made Commander-in-Chief of all the French armies (except those in North Africa and the Colonies), but remained responsible in particular for the north-eastern frontier. This solution was detrimental to the Army of the East, but its chief significance lay in the complete

surrender by the Government of their prerogatives and their absolute bankruptcy *vis-à-vis* the higher command."

"The same short sightedness prevented a clear conception of the requirements of a coalition war. From a military standpoint the Triple Entente of 1914 was totally unorganized." Between France and Great Britain all arrangements were hypothetical and no general strategic plan had been officially visualised. "Between France and Russia the agreements between the staffs were more advanced, but were not drawn up as part of a general strategic plan."

"It was not until 1918, when unity of command was imposed first as the only method to avoid defeat, then to attain victory, that there was any real unity of strategic conception amongst the allies. The task was made easier since, with the exception of a small section on the Swiss frontier, there was but one front from the North sea to the Adriatic. Even so the supreme command conferred on Marshal Foch was more diplomatic than strictly military in its relations: Marshal Foch had in reality only one 'subordinate,' General Pétain. Even General Pershing felt the desire for autonomy grow with the strength of his army. During the 1918 campaign as a whole, however, the allied armies acted in accordance with the strategic ideas of Foch, who attained unity of action in the coalition; the progress made since 1914 was immense. This was also the case from another standpoint; the higher commanders had adopted the habit of making a study of the material and the moral value of their troops and of basing their operation plans upon the conclusions of these studies. We need hardly mention that this method of reasoning never entered their heads before 1914. It was certainly laid down that each company commander should know each of his men personally, but higher up in the chain of command this knowledge of the men and the possibilities which their individual idiosyncrasies afforded gradually decreased. At G. H. Q. only one distinction was known—regular divisions and reserve divisions. The latter had fallen into complete discredit, which their special organization, lack of cohesion and inadequate armament, justified *a posteriori*. As to the regular divisions, a few enjoyed special distinction on account of their more advanced training; but as a whole they were considered on an equality. It is possible with a certain amount of charitableness to trace the germ of a tactical manoeuvre in the French plans of operations during the battle of the frontiers; penetration

of the German centre, intended to permit of the envelopment of the right wing. But nothing, either in the orders, or in the previous doctrines, or in subsequent criticisms, indicates that the peculiarities of composition of the units engaged were ever taken into consideration.

To sum up—as regards the general conduct of operations, the war doctrine of the headquarters staff of the army and the military conceptions of 1914 were characterized by :—

Ignorance of what a war on two fronts might involve.

The misconception of the needs of a coalition war.

The drawing up of a plan of campaign without allowing for the contingencies which might arise owing to the special characteristics of the troops.”

“To-day the hypothesis may be based on political-military situations, and the conclusions to be drawn from our new Statute of National Defence oblige us, on the contrary, to visualize three forms :—

(i) A coalition war.

(ii) A war on two fronts.

(iii) As far as possible a well balanced mutual adaptation of the means to the end and *vice versa*.

These three forms are forced upon us by those new factors which have arisen since 1918, and which in chronological order are :—

The formation of the League of Nations.

The new Italian policy.

The French military re-organization based on the nation in arms or mass levy.”

“The case of war is definitely provided for by Article 16 of the Covenant of the League of Nations. According to this text, the direct results of a power resorting to arms contrary to the engagements of Articles 12, 13 and 15, is the formation of a coalition against her, of all those States who are members of the League of Nations.” “If the League of Nations desires to survive it will have to arrive at some method, it may be by separate so-called regional agreements, of rendering the provisions of Article 16 practicable. These provisions aim at an organization of the coercive action of the League of Nations, basing it on the power of arms

supported by measures of an economic nature, which would result in the complete blockade of the aggressor state."

"The efficacy of economic measures was clearly proved during the World War, and with it the difficulties encountered in its application."....."The Covenant prohibits all trade relations either public or private between the states which are members of the League and the aggressor state. The results of the strict application of this principle would be to cut short the wearying discussions between belligerents and neutrals on the subject of the 'rationing' of the imports of the latter."....."Amongst the adherents of the League of Nations there will not be any neutrals. The recollections of the war prove the difficulties in applying this principle; for instance, Switzerland in her negotiations with the allies based her case on the fact that she imported German coal in normal times, and that the allies were not in a position to provide her with the quantities of this fuel which were indispensable to her. Therefore she was obliged to continue her economic relations with Germany: result a breach in the allied blockade."....."The prohibition of trade with a defined power, implies solidarity amongst the remainder which, to be effective, should be organized beforehand."

"This also applies to the provisions of a strictly military nature—numbering two—of Article 16 of the Covenant. The first refers to the formation of the armed forces intended 'to be used to protect the covenants of the League.' The second deals with the movements of these forces and lays the nations adhering to it under the obligation of taking 'the necessary steps to afford passage through their territory to the forces of any of the members of the League which are co-operating to protect the covenants of the League'."

"The execution of the second provision merely demands good faith and as such is more especially a question of politics.".....
 "The first point is far more delicate. In fact Article 16 states that 'it shall be the duty of the Council in such a case to recommend to the government concerned what effective military, naval or air forces, the members of the League shall severally contribute' to the inter-allied forces which are to be found. Now this is a most difficult task demanding, if it is to be successfully carried out, the effective and whole-hearted co-operation of the governments and staffs concerned with the Council of the League of Nations."

"The latter has no technical military organization at its disposal to enable it from professional knowledge to determine what effectives each state should contribute." This point is developed at some length and also the question of drawing up a plan for the employment of the forces, and a case is made out by the author to his own entire satisfaction, that the task of working out the plans and staffing this force should be entrusted to the French headquarters staff. The author states that in default of any arrangement amongst the staffs in peace time, the study of the different eventualities which may arise, taking into consideration the many intricacies of nationalities in Europe and the study of a plan of campaign in each case, devolves upon the French higher command. He proceeds to develop this idea as follows :—

"This plan should be fairly definite and fairly advanced, presenting sufficient advantages to carry weight during the discussions between the staffs of the powers called to co-operate in the coercive action decided upon by the League of Nations." He anticipates that the Council of the League would "transform itself into a directing organization for the coalition, similar to the Supreme War Council which met at Versailles." This Supreme War Council would probably be entirely absorbed in its political plan and would create an inter-allied staff responsible for the preparation of its military decisions.

The author thinks that in a meeting of this type it is extremely probable that the generals would reach an agreement, if one of them were to submit a definite and well-thought-out plan of campaign. The essential would be that it should be based on a sound conception of a coalition war, and above all that it should rise to the conception of a general operation as closely co-ordinated as possible, in order to employ all the forces at the disposal of the coalition to the best advantage.

The author thinks that it is, therefore, "absolutely essential for the French staff to apply part of its studies to the hypothesis of a coalition war, which, as we have seen, is a new aspect for it and will force it to break with its traditions of 1914." He points out that it is obliged to do so not only from a theoretical point of view, but on account of concrete agreements, notably the agreement with the Belgian staff concluded in 1919, and under the Locarno Agreement.

The author next considers the hypothesis of a Franco-Italian war. He starts by pointing out that Mussolini is not immortal and that his successor is unknown. Also that the Duce himself has given vent to disquieting statements, notably that he warned Europe that between 1935 and 1940 Italy will be in a position to make her "voice heard and at last see her rights recognised." The author points out that 1935 is the last year of the occupation of the Rhineland, and also coincides with the beginning of the period when the French annual contingent will be at its lowest, owing to war losses and the low birth rate in the war years. He considers, however, that Great Britain will act as a brake on Italian activities.

He also considers that Italy, through certain aspects of her policy, is thrown back on the same side as Germany. He makes the obvious remark that a combined Germano-Italian action would place the French in a very different position to 1914. Certain Italian claims with regard to France have assumed such a character that the royal troops would inevitably be led to fight in force in the Alps (and not on the north-eastern frontier of France as was the Italian arrangement with the Germans in 1914), in order to secure some territorial advantages (Nice, Provence, possibly Savoy), without mentioning Corsica and Tunis. He remarks that a strategic situation of this nature would be extremely delicate.

The French dare not concede territory to either Germany or Italy, on account of the proximity of the Lorraine basin on the one hand, and the hydro-electrical installations on the Alps and the Lyonnais industrial region on the other. This is sufficient reason to point to the necessity of the French General Staff considering a war on two fronts.

In addition to the coalition war and the war on two fronts, "the preparatory work in the studies of the command should also include in their programmes a third factor, new also, but which is a definite fact: this is the quality, we might call it the "texture" of the units of the mobilized French army, as the outcome of our new military laws."

Under the new laws, France on mobilization will have 20 "Metropolitan" divisions; at the same time 20 reserve divisions will be formed. Additional formations will only be possible when war industries are able to equip them. Hence, France can count certainly on 40 divisions, perhaps on 50. It is considered safer

not to reckon on colonial formations. The 40 divisions will require 1,200,000 men, including non-divisional troops and adequate reserves. This figure includes 20,000 professional officers and 50,000 to 60,000 professional soldiers (in each case an allowance is made for officers and men required for administrative services, and for the colonial army), and 120,000 or 240,000 of the annual class according to the period of the year. Thus the active army will only provide one-sixth to one-fourth of the men required for the 40 divisions. Hence five-sixths to three-fourths of the French army will be composed of reservists.

The article concludes with a plea for the better study of strategy by the French higher command.

The proposed Trans-Saharan Railway. (Reference, Monthly Intelligence Summary, Vol. XII, No. 5, March, 1928, page 151.)

The Bill giving authority for the setting up of a Commission to study the construction of a railway line uniting French North and West Africa, has now been accepted by the Senate and passed into law.

Cinematograph Training in the Army.

The *Journal Officiel* of 25th May 1928, publishes the following information regarding cinematograph training, in connection with a draft bill for the creation of a national cinematograph office.

The General Staff uses the cinematograph as a method of instruction and for the purpose of organizing such instruction has at its disposal the cinematograph section of the army, attached to the *Service Geographique*.

In the 1927 Budget, 200,000 francs were allotted for this purpose.

The cinematograph section, under the orders of the General Staff, buys, distributes and repairs cinematograph material in service in corps regions and carries out the taking of pictures and the preparation of films;

At present 13 film collections are in existence, each comprising some 40 films. These collections are sent in turn to the different corps regions.

The General Staff propose firstly to provide each corps region with a collection of films and subsequently, when sufficient credits are available, to extend to units the temporary organization which has already been set up in the most important garrisons.

July, 1928.

1.—*The Battle of the Avre. (Part 3.)* By Commandant d'Argenlieu.

Of interest. Continues the story of the Battle of the Avre on 28th March, 1918. This chapter is mostly confined to the narrative of the movements of various formations subsequent to the decision of General Debeney, Commanding 1st French Army, to collect his forces together, and not to engage the enemy, until they were concentrated and disposed in a suitable position for utilization of their fire-power. The intervention of the Higher Command to stabilize the situation due to German infiltration on both flanks of the front, and subsequently to the West of Montdidier, and General Debeney's refusal to permit any retreat on the left bank of the Avre, are discussed.

2.—*The Defence of the Bois de Ville and Herbebois—Verdun, 1916. (Part 3.)* By Lieut.-Colonel Paquet.

Of no particular interest. Concludes the detailed narrative of this hard-fought combat, but fails to summarize the lessons to be drawn from it, which appear to be numerous as regards the best methods of attacking or defending an occupied wood, the alternation of defence and counter-attack, and the use of artillery in such operations.

3.—*Notes on Napoleon's Battles. (Part 2.)* By General Camon.

Of interest. In this chapter General Camon discusses Friedland and Waterloo in the light of Marengo. The first, the narrative of which is based on the "Bulletin," was of course a good example of manœuvre, intended to cut off the enemy's line of retreat. His analysis of the battle of Waterloo is so partial as to be ridiculous, except as regards Napoleon's original intention, i.e., the manœuvre intended to break the British right and centre, and so cut off the line of retreat on Brussels.

4. *The Passage of Rivers in the Face of the Enemy. (Part I.)* By Lieut.-Colonel Baills.

Of interest. The author quotes the statements of Frederick the Great and Napoleon in this connection, which are worth studying, being practically identical ; it is, however, he says, a matter for discussion whether their experiences fill the case of a long continuous front, as seen in the last war. His memorandum is intended to investigate the effects of modern means and matériel on the lessons of the past.

The following examples, with documentation as to "means" available are here quoted :—

Passage of the Rhine by Moreau at Kehl, 1796.

Passage of the Rhine by Moreau between Kilstett and Diersheim, 1797.

Passage of the Danube by Napoleon in 1809.

5. *The reform of Military Justice.* By Capitaine Andrieux.

Of interest. This has been a moot subject since 1919, and a new law on the subject was ratified in 1928, which forms the subject of the present clearly-written article. The contents of this law, as affecting a highly democratic short service army are of considerable interest to professional officers, especially in the following directions, viz. :—

Constitution of military tribunals, in peace time a magistrate of the Court of Appeal will be President—differentiation between military and civil crimes—suspension of sentence—appeal—extension of competence of military tribunals in war time—suppression of certain punishments, i.e., hard labour, and the ceremonial of degradation, and the institution of heavier punishments for insults to the national ensign, to superior officers, mutilation (death penalty on active service).

GERMANY.

THE ARMIES OF TO-DAY.

The following lecture was given by Colonel-General von Seeckt, who was Chef der Heeresleitung until October, 1926, at Berlin on 3rd April, 1928.

Note on Colonel-General von Seeckt.

Von Seeckt was commissioned in 1887 into the Kaiser Alexander Garde Grenadier Regiment. On the outbreak of the war in 1914 he was Colonel and Chief of Staff of the III Army Corps which fought

against the British. Early in 1915 he was appointed Chief of Staff to the XI Army under General Mackensen, which shortly afterwards inflicted a severe defeat on the Russians and recaptured Przemyśl. He then became Chief of Staff to the Army Group which over-ran Serbia, and afterwards Chief of Staff to Tsar Ferdinand of Bulgaria. In 1917 he became Chief of the Turkish General Staff, which post he held until shortly before the Armistice.

When the Kapp Putsch occurred in 1920 and the Government fled from Berlin, Von Seeckt was made temporary Commander-in-Chief with full powers to restore order. This he did without firing on the rebels. Shortly afterwards he was appointed Chef der Heeresleitung, which post he held until his resignation in October, 1926. During this period he was responsible for the complete reorganization of the German Army.

General von Seeckt.

The following ideas represent purely my personal opinion, and are devoid of any official character, even though such might be imagined from the consideration of my past career. They are also unconnected with conditions in the German Reichswehr, being purely fanciful conceptions untrammelled by the fetters of the Versailles Treaty. Finally they are entirely confined to land operations and leave naval questions to be dealt with by the competent experts.

In order to sketch out more definitely my subject I should like to put forward, and if possible to answer, the following questions: What is the present trend of military development? Are armies still necessary? What will they look like? How will they operate? The fancies to which I shall here give rein are therefore deduced from very real actualities, though I am not blind to the dangers of all prophecies.

In order to establish a definite starting point, let us first briefly glance at those armies which took the field in the world war. In doing so we come to the astonishing conclusion that all of them were more or less insufficiently organized for the purpose. Comparisons are simplified by the fact that the Great Powers of the Continent of Europe had based their defence systems on the principle of universal service, and that all in common endeavoured to deploy on their frontiers very rapidly, and numerically as strong as possible. The brilliant achievements of the German organization need not be

stressed here, but three cardinal mistakes may be pointed out. In spite of the universal conviction that a war would be a matter of life or death to Germany, and in spite also of the fact that, at any rate in military circles, we reckoned on a war on two fronts, that is to say with a numerical superiority on the part of the enemy, our national resources were not fully exploited from a military point of view and universal service was not carried through to its full extent. For sustaining the struggle, *i.e.*, for maintaining reserves, neither personnel nor material was sufficiently provided, and by the same token actual economic mobilization did not exist. We owe it to the foresightedness of Walter Rathenau and the perspicacity of the War Minister Falkenhayn that after the outbreak of war at any rate the necessary measures were taken to hold out economically. Everything was risked on the strength and rapidity of the first blow, although Schlieffen had warned us by pointing out the possibility of another 7 years war.

France exploited her manpower thoroughly, as well as that of her colonies. On the other hand her material equipment proved insufficient, especially after the occupation of the industrial districts in the north and east. She was helped out by America's powerful support, without which France could hardly have supplied her own requirements, particularly as regards ammunition.

Russia could not at first draw full advantage from her enormous population; she had available an almost inexhaustible reserve of manpower, and managed to put her reserves into the front line at the right time and tolerably well trained. Against this, however, material armament was and remained quite inadequate. The allied ambassadors were continually forwarding to their governments requests on the part of Russia for arms and ammunition; her own war industry never reached a stage of any considerable production.

Austria-Hungary was of all the great Powers certainly the worst organized for the war—both as regards personnel and material. The different reasons for this state of affairs need not be considered; the consequences showed themselves in the rapid decline of the striking power of the originally splendid army and in the increasing economic demands made on Germany.

England was organized both for peace and war differently from the continental powers. Although, in military circles at any rate,

participation in a big war was considered, little preparation had been made to exploit fully the military resources of the nation. Evidently it had been expected that the Navy and the seven regular divisions, excellent and immediately ready for action, would have sufficed for the country's needs. For the equipment of this force the national industry, which was efficient enough, was adequate. It was Lord Kitchener's greatest merit that he recognised in good time that efforts of quite a different kind were necessary to produce a final victory, and that he introduced suitable measures. The results produced by English organization during the war are truly astonishing. As the new armies required time to take to the field, the national industry had time to reorganize, and where it failed America came to the rescue.

The *United States of America* occupied a peculiar position as regards organization for war. Together with the Navy the comparatively small peace army sufficed for current needs, and her geographical position allowed America to choose the precise moment for her entry into the world war. When once she had decided to come in, her organization developed an overwhelming activity, which enabled reserves of men and material to produce an army, whose resources were hardly broached at the end of the war.

The situation of the other belligerent states, though differing in detail, was in general similar.

Now to what military success did all this universal *levee en masse*, this titanic mobilization of armies lead? In spite of every effort the war did not end in the decisive annihilation of the enemy on the battlefield. Actually it petered out in the attrition of trench warfare, until the powers of resistance of one of the combatants, as regards personnel and material, and finally as regards morale, were beaten down, without really being conquered by the other's superior force. Was the victor truly elated by his success? Are the results of the war in just proportion to the sacrifices of national resources? When recourse must be made to arms, is it necessary every time for whole peoples to hurl themselves at each others throats. The soldier must ask himself whether these gigantic armies are still capable of being commanded in the sense of decisive strategy, and whether any future war between such masses must not again end in a stalemate.

Perhaps the principle of the nation in arms, the *levee en masse*, is to-day out of date, the *fureur du nombre* a thing of the past. The mass becomes immobile; it cannot manœuvre, therefore it cannot conquer; it can only stifle.

Let us now glance at the conclusions which the leading powers have drawn from their own experience as regards the organization of their armies, naturally omitting those states whose armies have been restricted by the Peace Treaties. America and England have in essentials returned to their pre-war organizations, that is to say to the principle of small peace armies, ready for immediate action; only America has now considerably extended her arrangements for industrial mobilization and for the military training of her youth, while England has developed a strong air arm. France is engaged in reorganizing her army on new lines, the main features of which consist in the provision and maintenance of a peace army approximately at war strength, and consequently ready for action at short notice. At the same time France adopts a complete system of universal service in order to provide strong reserves. The period of colour service has been much reduced, so as to ensure that all men capable of bearing arms are trained without keeping the peace establishment at too high a level, while the value of the peace army ready for instant action is raised by the retention of a greater number of long-service volunteers. Industrial mobilization and the early training of youth are carefully worked out, as is also the utilization of black troops. The powerful French air force immediately ready for action, is especially worthy of notice. *Italy* seems to count on supporting her professional army by the employment of Fascist militia and in exploiting actively the military-fascist training for her youth.

Russia, still hampered by many difficulties, but making decided progress, is trying to provide herself with a peace army, ready for use and proportionate to her need for security, and at the same time is endeavouring to gain military control of her enormous man-power by a militia system. In the newly organized armies of Poland, Czecho-Slovakia and Yugo-Slavia we find throughout the pre-war system of universal service, with the period of active service reduced as low as possible and the necessary peace armies maintained in a state of the greatest possible readiness.

Thus it would appear that the practical utilization of war experience has resulted in no great departure from the principles of pre-war

days ; although new tendencies are becoming very distinct. The general economic situation compels all states to reduce their expenditure in armaments, and in particular to reduce the costliest form of armament—namely strong and fully equipped long-service standing armies, and at the same time to limit as far as possible the unproductive exploitation of the nation's manpower by military service.

The present political situation is such, however, that there is need for a feeling of security against sudden hostile attack. This feeling of security can only be obtained by the maintenance of a standing army immediately ready for action, and by the desire on the part of each state to be prepared for a war of life and death by organizing its national resistance to the fullest extent. Preparations for a national war are really defensive measures, the scope of which depends on the extent to which one state is threatened or feels itself threatened by its neighbour. This feeling of insecurity cannot be given an arithmetical value in computing the possible extent of disarmament. The only factors which are comprehensible and which can be included in striking the balance, are the figures of the available resources ; the greater guarantee of peace lies in adjusting the balance of power rather than in seeking an idealistic and unattainable reduction of power. Thus can we shortly dismiss the problem of disarmament.

The basis of the war is the struggle between man and material. The shield was invented to meet the sword, the concrete emplacement to meet the high explosive shell, the respirator to meet gas. This struggle will continue so long as war exists, and from time to time the offensive weapon will gain the upper hand until the defence has over-reached it. Science works for both sides. It is therefore quite misleading to talk of the triumph of the machine over man. The machine has only defeated mass humanity and not man himself, and never will, for it can only come to life in the hand of man.

The mistake lay in opposing an immobile, almost defenceless mass of humanity to ruthless machinery. The more we increase the masses of our fighting men the more certain becomes the triumph of the machine ; for its limits exceed those of the supplies of manpower. The matter therefore resolves itself into a war between the human brain and inorganic matter. As science advances and as more inventions and resources are placed at the disposal of the army, the demands made on the soldiers, who utilize the new weapons, will

increase. Anyone who has even a slight idea of the technical knowledge, the highly specialized training, the complicated instruments, and the well drilled morale required in order to control effectively the fire of modern artillery, must admit that these conditions cannot be attained with hastily trained troops, and that such troops are only cannon-fodder, in the worst sense of the word, when opposed to a small number of highly trained specialists. But what happens when these troops do not exist and when no living target is presented to the machine controlled by science. Destruction of the enemy's army, not destruction of his country, is still the first law of strategy, although sometimes it may appear in a different guise. The machine wins its victory over the living and mortal mass, not over the living and immortal human brain.

Whoever speaks of modern military science, will first of all think of the air arm. Partly in the World War, but really only after it, this new arm took its place in full partnership with the land and sea services. Yet there has been no alteration in the principles of war. The soldier and his allied technician merely have to contend with one additional battlefield with its particular conditions. The possibility of air attack on the vital points of national powers of resistance, that is to say on the by no means new but to-day more readily accessible centres of military strength, has led to false conclusions as to the dispensability of land forces.

The only difference is this: whereas hitherto fighting has been confined to the land and the sea, decisions will now be sought in the air. People are often apt to think that in future the fighting will be carried on above the heads of the soldiers and will be directed exclusively against the civilian in office and workshop. War against the back areas and against the civilian is no new thing in history, and it would be foolish to deny or to make light of the dangers and horrors of air attack on back areas, especially in combination with the use of gas. It brings the same dangers and the same objects into a new theatre of war; active defence against this form of attack is the task of the air arm, which, as the best counter-measure, seeks to carry the attack into the enemy's country, or at least to destroy the attacker. This new danger has given rise to a new demand, the provision of some form of passive defence for the vital centres of a country, though this method is no doubt costly and cumbrous. It is

difficult to understand and still harder to justify the fact that we in Germany, to whom active air defence is denied, are doing absolutely nothing in the way of this passive defence.

After this brief examination of the present state of armaments, let us try to picture to ourselves the course which a future war will take.

Hostilities will open with attack and counter-attack on the part of the opposing air fleets, since they form the forces which are readiest for action and swiftest to strike at the enemy. The objective will first of all not be capital towns and sources of power, but the opposing air force, and only after its conquest will the other objectives be attacked. When conditions are more or less equal, a decision will not be reached very rapidly, even when one side is forced to remain on the defensive. How far-reaching are the material and moral successes of the superior attacker depends on the powers of passive and moral resistance of the defender. It must be remarked in this connection that all large troop concentrations form easy and good targets. One of the main tasks of the air attack will be to disturb the mobilization of the enemy's man-power and industry.

The attack initiated by the air force will be taken over as rapidly as possible by the troops most ready for action, *i.e.*, essentially the peace-time army. The greater the efficiency of this army, the greater its mobility, the more determined and able its commanders, the greater will be the prospect of its rapidly putting the hostile force opposing it out of action and of preventing the enemy from organizing and sending into action further forces, and perhaps even of compelling him to seek peace. Whilst the two regular armies are engaged in the struggle for the first decision, in their rear will commence the organization of the defensive power of the country. The victor in the first phase of war will attempt by means of his superior armament, training and mobility to prevent the masses—superior in number, inferior in quality—of the enemy from developing their power and particularly from organizing fronts bristling with material, whilst on the other hand he will draw from his own reserves of men and material the support required to maintain his own striking power. I therefore see, to resume briefly, the future of the conduct of war in the employment of highly efficient and highly mobile armies, *i.e.*, smaller armies, whose effect is considerably increased by

the air arm, and at the same time in holding ready the whole of the man-power of the country either for adding weight to the attack or for defending their country to the last.

The need for these modern armies cannot be gainsaid. Their task has been briefly sketched above. It is interesting to speculate as to what they will look like.

The peace-time army, which may also be designated a covering or operating army, will consist of professional soldiers, if possible of volunteers, serving for a long period. The length of colour service will vary and will depend upon the purpose for which the individual soldier is to be employed, it naturally following that highly technical training will necessitate a longer period of colour service, whilst in other units young men sound in mind and body are required. The strength of this army will be in proportion to the financial resources of the country, its military and geographical situation and its size, and it must at least provide it with security against surprise hostile attack.

It will be objected that this will provoke competition in armaments ; but, apart from the fact that the strength of the very costly peace-time army is limited by the financial resources of the country, the strength of peace-time armies offers the best object for international conventions, and consequently for the limitation or adjustment of armaments. It goes without saying that each country will raise this army to the very highest pitch of perfection both as regards the training of commanders and men and its armament and equipment. In this connection there are three main requirements, *viz.*, great mobility, to be attained by the employment of numerous and efficient cavalry, and by the utilization to the utmost of mechanized trains and of the marching capacity of the infantry, by the best possible armament, and by constant replacement of men and material.

For its first entry into action, this army of manœuvre requires at best no additional personnel, or at any rate, only a small increase, therefore no mobilization.

In addition to and in close touch with this army is a permanent training staff, composed of officers, non-commissioned officers and men, through whose training units and schools pass the whole youth of the nation that is capable of bearing arms, with an initial short

period of service followed by the necessary refresher courses. This will result in the creation of a force which, although unfit for employment in open warfare and offensive decisive battles, is yet in a position, after completion of its training, such as it is, and adequately armed, to undertake the task of defending the country, and at the same time, by supplying drafts drawn from its best elements, to maintain the fighting field army proper, at full strength. In order to make this short period of training endurable it must be carried out with the youth of the nation, but weight must not be laid so much on the military side as on physical and mental training. It can only be made effective, however, if imposed by the State. It would take us too far afield to go into the details of this organization, such as the obtaining and training of future officers, but a few words may well be devoted to the question of armaments, which is closely bound up with that of the indispensable economic preparation for war.

In discussing this question we must proceed from the principle that any army never, or, at least, only temporarily, possesses the weapon it would like to have, and which is the best possible weapon at that particular moment; for as soon as a weapon is introduced it becomes obsolete owing to the rapid progress of science. The expense of the conversion of the armament and of the re-arming of a large army is so enormous that no country will undertake such measures until actually compelled to do so.

The smaller an army is, the easier will it be to arm it on up-to-date lines, while it is impossible to keep in stock sufficient supplies of modern armament for armies which number millions.

The necessity for having the field army constantly ready for immediate action and armed with the best possible weapons makes it necessary to have armament available in sufficient quantities and of the very best quality. It is also necessary to maintain reserve stocks and to organise sources from which these stocks can be replenished. The cost of this demand has the effect of restricting the strength of such a peace-time army. But the strength having once been decided upon, not only must the armament and equipment deemed necessary to be in the hands of the army, but also the stocks required for initial replacement must be available to meet requirements until the factories, which exist for this particular purpose, start producing fresh supplies. This demand is in itself obvious, and would present no

novel feature if we were only dealing with *levee en masse* of the nation. Actually, the main consideration is the smaller field army, and this places the arming of the nation on an entirely new basis. It is impossible to hold stocks of armament and equipment ready for a modern army of millions if the justifiable demand is put forward that these masses, in view of their inferior military training, require special support from the material issued to them. The accumulation of large reserve stocks is the most uneconomical state of affairs which can be imagined. Further, in consequence of the fact that they naturally soon become obsolete, such accumulations would be of doubtful military value. Think, for instance, of stocking thousands of flying machines, which are frequently rendered worthless after the lapse of a year in consequence of the production of new types.

For the arming of the masses there is only one way; to decide upon the type of the weapon, and then to prepare for mass production when the need arises. The army, allied with science, is in a position, by constant study in experimental establishments and on the training grounds, to decide what is the best type of weapon for the time being. Arrangements should then be made with industry under which the production of this type could be taken in hand at once and in the requisite numbers. This necessitates thorough preparation for which legislation is indispensable. These preparations should be made in close co-operation between soldiers and economists, who, after deciding what raw materials are required and after making provision for them to be available, would deal with the selection and installation of the factories for all parts of the armament and equipment. To prepare the conversion of factories from a peace to a war footing and the holding ready of material and plant, naturally require government subsidy in peace time. This, however, will be more advantageous to the State than the acquisition and maintenance of large obsolescent stocks of arms. If the military requirements are framed with a view to rapid mass production by renouncing the finest in favour of the simplest possible material, then the time elapsing between the placing of orders and the commencement of deliveries can be reduced to a minimum. This gaining of time is the task of the manœuvre army in the field.

A great number of problems of a military and economic nature suggest themselves in considering these questions. I have been able

only to touch lightly upon them here, but I shall feel content if this excursion into the field of military fantasy should result in further attention being paid to these questions.

HOLLAND.

MINISTRY OF DEFENCE.

By Royal Decree of 11th June, 1928, the Departments of Marine and War are to be abolished as from 1st September next, and the Department of Defence substituted for them.

This Decree gives effect to the Decree of 2nd October, 1920, which constituted the Department of Defence, but did not fix the date on which the new Department was to come into being. The Bill, on which the new decree is based, was passed on 20th February, last.

For some time past, M. Lambooy has been in charge of the Ministries of War and Marine, and therefore, *de facto*, Minister of Defence.

By the present constitution of the Netherlands East Indies, the Governor-General is the Commander-in-Chief of the naval forces in East Indian waters, but he has no official relations with the Ministers of War and Marine but only with the Minister of the Colonies. It is not yet known whether it is proposed to modify this constitution in view of the creation of the Defence Department.

ITALY.

OPERATIONS IN LIBYA.

(In continuation of the report of operations in Libya published in the Monthly Intelligence Summary for April). Many refugees from the Gialo and Marada cases fled to the Jebel district east of Bengazi. General Mezetti had, however, left a number of troops in that district, to whom he accordingly issued orders to round up the fugitives. Three columns were formed at Barce, Mechili and Maraua. Lorenzini's armoured column was also despatched from Marada to join the forces in the Jebel. It had to cross 700 kms. of difficult country to do so, but arrived successfully at Ghedir Bu Ascher after a trek of five days.

On 31st March the columns advanced simultaneously over the desert district of Es Sciaafa, and encountered desperate resistance. Over 200 tribesmen were killed and a large number of rifles were

collected. It would appear that these tribesmen, having been evicted from the oasis district in the south, were attempting to escape into Egypt, and the determined manner in which they fought is accounted for by the fact that the only line of retreat along which there was any hope of finding water had been severed. Lorenzini's armoured column again played the principal part in this action. The Italian casualties were negligible; their aeroplanes, were however, constantly hit by bullets, but none were brought down.

These operations mark an important step in the process of pacifying the northern portion of the Italian colony.

ECONOMIC CONDITIONS IN TRIPOLITANIA.

Owing to a shortage of rain during the winter 1927-28, the crops in Tripolitania have, for the third successive year, again practically failed. Tripolitania has been particularly unfortunate, as both in Malta and Tunisia the rains were abundant. Grazing has also suffered and there has been great mortality amongst the stock. The poverty of the native population is consequently severe, and trade in the colony, largely dependent on the welfare of the natives, is stagnant. Merchants have been adversely affected and several bankruptcies are reported. Instead of obtaining exports from the colony, Italy was obliged, during the latter part of 1927, to import 30,000 tons of barley into the colony.

In an endeavour to improve trade, an industrial fair, which was visited by the King, was held in April this year, but the results expected have not been realized. The Italian Government have now subscribed 50,000,000 lire towards the improvement of conditions in the colony; the money is expected to be spent on public works, such as roads.

JAPAN.

DESPATCH OF TROOPS TO CHINA.

In the April edition of this Summary it was reported that the 6th Division from Kumamoto had been despatched to Shantung.

During the month of May the following movements of Japanese troops have taken place:—

To Shantung.—A detachment of four infantry battalions amounting to about 2,000 all ranks, from the garrison of the Liautung

leased territory left Dairen on 5th May and reached Tsingtao on 6th May. A military air corps unit despatched from Korea arrived at Tsinanfu on 9th May. An additional railway unit from Japan also arrived at Tsingtao about that date. On 8th May the Japanese Government decided to send a division at war strength from Japan to Tsingtao. Consequently detachments of the 3rd Division from Nagoya began to arrive at Tsingtao on 19th May, and by 26th May the whole of the 3rd Division (less the 18th Infantry Regiment detached for duty at Tientsin) had arrived in Shantung. General Yasumitsu, who commands the 3rd Division, was placed in command of all Japanese troops in Shantung on his arrival there on 23rd May. The strength of the two Japanese divisions in Shantung are : 6th Division about 5,000, and 3rd Division—(war strength, less one regiment)—about 10,000.

To Tientsin Area.—The three companies despatched as an emergency measure last month from Tientsin by rail to Tsinanfu returned to Tientsin on 18th May. A reinforcement of five infantry companies from Japan arrived at Tientsin on 20th May. On 23rd instant an aerodrome with six aeroplanes was established at Chinwangtao. The 18th Regiment of the 3rd Division from Japan, together with a battalion of field artillery—total strength about 3,470—arrived at Tientsin before the end of May.

To South Manchuria.—The detachment of four battalions sent from the leased territory to Shantung was replaced in Manchuria by a reinforcement of the same strength from the Japanese garrison in Korea.

In South Manchuria the Japanese headquarters was moved on 23rd May from Port Arthur—within the leased territory—to Mukden where the Japanese had concentrated their South Manchuria garrison.

In Korea, owing to a clash between Japanese troops and Chinese bandits on the frontier in the Yalu river region, a detachment of the 20th (Japanese) Division from Seoul, the capital of Korea, was sent on 30th May to protect Japanese nationals in the region of the frontier.

JAPANESE TROOPS IN CHINA.

Shantung.

(a) A clash occurred about 40 miles north-west of Tsingtao on 20th July between Japanese troops and a nationalist force, estimated

to have been 4,000 strong. The latter were found within the prohibited zone of $6\frac{2}{3}$ miles from the Tsingtao-Tsinan railway, and the Japanese troops attempted to disarm them. The Japanese casualties amounted to 7 killed and 23 wounded. There were several hundred Chinese killed.

No further trouble is expected, as the Chinese commander has expressed his regret and promised to comply with any demands the Japanese may make.

(b) With this exception the situation in Shantung has remained quiet during the month. The Japanese Government has, therefore, decided to effect a partial reduction of the troops in this province. It will be remembered that shortly after the Tsinan incident the mobilized 3rd Division was sent from Japan to Shantung to reinforce the Japanese garrison already there. It has now been decided to release the majority of the reservists of this division, who will return to Japan and be demobilized. About 6,000 men of the second reserve, and the older men of the first reserve, are affected. The first batch of 1,500 left Tsingtao on 16th July, and was followed by the remaining contingents throughout the month.

(c) The Japanese Government have re-stated their anxiety to withdraw their garrison completely from Shantung, but they have made it clear that complete evacuation will not be possible until a settlement of the Tsinan incident has been reached. They have, therefore, requested the Nanking régime to appoint representatives to discuss the Japanese demands. These are :—

- (1) An apology by the Nationalist Government.
- (2) The punishment of the Chinese soldiers concerned.
- (3) Reparation for damage done.
- (4) Guarantees against future incidents of the same nature.

No discussions have taken place up to the present, and there is reason to believe that the Nationalist Government are unwilling to negotiate until the Japanese garrison is withdrawn. For the moment the matter is, therefore, at a deadlock.

Tientsin Area.

In order to implement their declared policy of preventing the civil war spreading north of the Great Wall into Manchuria, the Japanese towards the end of July moved about 700 troops from

Tientsin to reinforce their garrisons at Chingwangtao and Shanhaikwan (on the Chihli-Manchurian frontier).

Continuing their policy of demobilizing the 3rd Division reservists, 1,250 reservists of the 18th Regiment of the 3rd Division, at present stationed in Tientsin, were moved from Tientsin for demobilization in Japan on 30th and 31st July.

Korea.

It was reported in the May issue of this Summary that a detachment of Japanese troops was sent from Seoul, the capital of Korea, to protect Japanese nationals in the neighbourhood of the Korean-Manchurian frontier. With the exception of one battalion which remains beyond the frontier in Manchuria, this detachment has now been withdrawn.

ARMY ESTIMATES, 1928-29.

The Japanese Diet was dissolved before the passage of the Budget. Under the terms of the Constitution, the Budget of the previous year has, therefore, been adopted as a working basis for the current year. Modifications in the shape of supplementary estimates are allowed, whilst in the case of programmes of continuing expenditure already passed for some years in advance the moneys voted for the current year are appropriated. Thus the total in practice bears little or no relation to that of the previous year.

Including all supplementary estimates, &c., the total for 1928-29 amounts to 224,353,336 yen—about £ 22 million. This represents an increase of about 12½ million yen (£ 1½ million) over the total for 1927-28.

The increase is principally accounted for by the additional expenditure already approved on the continuing programmes for “defence replenishment” and for the reconstruction of buildings destroyed or damaged in the earthquake of 1923. The present expeditionary force in China also accounts for increased expenditure included in a supplementary estimate.

A new item is one of 300,000 yen for the purchase of wireless equipment, and the item of 50,000 yen initiated last year for the provision of gas masks is to be continued.

LATIN AMERICA.

ARGENTINA.

RE-ARMING OF THE ARTILLERY.

The Government is considering the question of re-arming the artillery. It is practically certain that the new material will be obtained from France in part repayment of a considerable sum owing by that country to the Argentine. Unfortunately in the matter of armament contracts the Argentine authorities are inclined to consider cheapness rather than quality, which gives British firms a small chance of competing with firms of other countries. Recent naval orders have been given to Italy.

BOLIVIA.

GERMAN MILITARY MISSION.

Three non-commissioned officers of the German Military Mission to Bolivia, and three civilians—one a woman—have been tried at La Paz on charges of high treason. It was alleged that they were selling information to the military authorities in Paraguay. The non-commissioned officers' contracts were cancelled.

It is now believed that the whole of the German Military Mission is returning home as salaries have not been paid punctually.

CHILE.

TECHNICAL ARTILLERY ASSISTANCE FROM SPAIN.

A Spanish artillery officer, Major Andrades, has been appointed Professor of Ballistics to the Chilean army. The appointment, which is for three years with a possible extension, is the first of its kind to be held by a Spanish officer in Chile.

The interest taken by Chilean military authorities in the Spanish army is exemplified by the presence in Madrid, for a period of several months, of four Chilean cavalry officers who are attending a course there.

MEXICO.

REDUCTION IN THE ARMY.

President Calles has announced his intention of effecting an immediate reduction in the Mexican army from its present strength of nearly 70,000 to approximately 40,000 men. It is probable that

the motive which decided this step was entirely financial stringency. It is true that, as a result of the settlement of outstanding oil questions, relations with the United States have been placed on a much more satisfactory footing; at the same time the internal conditions of the country, particularly in the State of Jalisco, is far from reassuring and can scarcely be taken to warrant such a large reduction in the Federal Forces.

The Defence Budget for 1928 amounts to 97,500,000 pesos (£ 11,700,000), as compared with 90,000,000 in 1927. The proposed reductions have presumably not been taken into account in compiling the budget.

URUGUAY.

RE-ARMAMENT OF THE ARTILLERY.

The President has addressed a message to the National Administrative Council proposing that Uruguay should acquire immediately nine batteries of 4—75-mm. guns and two batteries of 105-mm. howitzers, with a corresponding amount of ammunition and transport, at a total cost of 1,659,000 pesos. The National Administrative Council is expected to concur in the proposal, but some opposition is anticipated in Parliament. There is as yet no indication as to the country in which the contract for this new artillery will be placed.

The Special Mission from Uruguay, which visited England in March to return the visit of H. R. H. The Prince of Wales, has left for Paris.

MOROCCO.

FRENCH ZONE.

The passing of two of the Grand Caids of the Great Atlas.

Two of the "Grands Caids of the South" have recently passed away.

The first was El Hadj Taieb el Goundafi, who has been associated with the history of Marrakech for many years past. He was one of the "seigneurs of the Atlas", the chief of the confederation of the Goundafa, appointed by the Sultan Moulay Hassan to dominate part of mountain range and the routes which pass through it, and as a rival of the Glaoua and of the Mtougga. He was an adherent of Moulay Hafid in his revolt against his brother Abd el Aziz. Under

the hand of General de Lamothe he remained faithful during and after the Great War. The French, however, gradually obtained more control of his tribal area and, on 30th April, 1924, he was appointed honorary "Grand Caid" and his caidate was apportioned between his eldest son and other caids.

The second is the Caid Mtouggui, who died at Marrakech. He was the doyen of the "Grands Caid" and was a contemporary of Mculay Hassan. His power had also begun to fritter away, but he remained loyal, collaborating with the French in the Protectorate.

The passing of these two caids at an advanced age has now no political importance, but it is interesting to note the definite folding back of a page of Moroccan history. Thami Glaoui, Pasha of Marrakech, now remains the only "Grand Caid" living.

PERSIA.

ANGLO-PERSIAN RELATIONS.

On 26th April, 1927, the Persian Government notified the Powers, with whom Persia was in treaty relations, of their intention to cancel existing treaties with effect from 10th May, 1928. The main objects in view were to ensure the abolition of capitulations and to obtain tariff autonomy.

While no specific mention of capitulatory rights had been made in the various Anglo-Persian treaties, Britain enjoyed "most favoured nation" privileges under the treaty of 1857. Thus the fact that other European Powers had obtained capitulatory rights dating, in some instances, from the sixteenth century, automatically conferred similar rights upon Great Britain. Likewise the cancellation of all other treaties entailed the loss to Great Britain of such rights.

As the judicial system in Persia in no wise conforms to Western standards, the question of securing adequate protection for British nationals was one which concerned His Majesty's Government very closely, and discussions on this subject were immediately opened with the Persian Government. For many months it seemed that Persia intended to stand on her dignity, but at the eleventh hour satisfactory assurances were received, and on 10th May, 1928, an important series of conventions was finally signed at Teheran.

Chief amongst these was an Anglo-Persian treaty regulating the commercial relations between the two countries. In this instrument,

which has been concluded for a period of 8 years, Persian tariff autonomy was duly recognized.

Pending the conclusion within a year of a full Treaty of Commerce and Navigation, arrangements for maintaining those provisions of existing Anglo-Persian treaties which do not limit Persia's right to settle her customs tariff autonomously, have been made by means of an exchange of notes. In addition, in view of the abolition of the capitulations, the Persian Government have agreed to apply an approved list of safeguards to protect the position of British nationals. They also stated their readiness to enter into negotiations with a representative of Imperial Airways, Ltd., regarding the conditions on which air facilities in Persian territory could be granted for the proposed service between Egypt and India. In regard to the latter concession, the Persian Government affirmed their intention of establishing aerodromes, and they agree that no reason existed for refusing permission to Imperial Airways, on certain conditions, to use such aerodromes.

While the above conventions cannot by any means be held to have settled all questions outstanding between Great Britain and Persia, the way has unquestionably been paved for further negotiation on a reasonably amicable basis. At any rate, it is satisfactory to observe that the suspicions which prevented the fulfilment of the Air Agreement of 1925 have now abated sufficiently for the Persian Government to re-open discussions on this important subject.

RAILWAY CONSTRUCTION.

On 19th April the Persian Government approved a contract with an American-German syndicate for the survey of 1,300 kilometres of the Trans-Persian Railway.

Authority was also given for the syndicate to construct short trial sections of railway at each end, and it was given an option for the construction of the whole line.

IMPERIAL AIRWAYS.

As was mentioned in the Confidential Summary for May, 1928, the Persian Government on 10th May notified their willingness to re-open negotiations with a representative of Imperial Airways on the subject of the extension of the Egypt-Iraq service to India *via* Persia. In accordance with this decision the general manager of the company

visited Tehran during June, and it is hoped that an agreement sanctioning the use under certain conditions, of Persian Government aerodroms by Imperial Airways, may be concluded in time to commence the Indian service next year.

TURKEY.

NEW RAILWAY CONSTRUCTION.

1. In the Blue Summary article for August, 1927, an account was given of the Turkish railway system, in which mention was made of the economic and strategic aspects of the new railways. The following summary shows the progress that has been made on the new railways up to date :—

2. (a) *The Samsun-Sivas Railway*.—Originally the construction of the Samsun-Sivas railway was to have been undertaken by the Turkish Government. After several years the line from Samsun to Amassia was completed; the work had been delayed by the inefficiency of the Turkish contractors and by peculation on the part of Government officials. The Turkish Government, in order to hasten the construction of this line, entered into a contract with a Belgian group for the completion of the Turkhal-Sivas section, giving a contract to local Turkish groups for the construction of the Amassia-Turkhal section. In January, 1928, it was reported that the earthworks from Amassia to Turkhal had been completed, and that the track would be laid by the end of June this year; the railway should then be open to traffic from Samsun to Turkhal. The Belgian group commenced work on the section allotted to them (Turkhal-Sivas), and, according to a statement by the Minister of Public Works, they had completed the earthworks of this section before the Turkish Government annulled their contract. No information is available as to why the contract was annulled, or whether the group received any compensation for the work done, but the Turkish Government have, however, now ordered the necessary material for the permanent way, in order to complete this line themselves. No information has been received as yet as to when they hope to finish this, the southern section of the Samsun-Sivas railway.

(b) *Sivas-Kaisarya Railway*.—The contract for the construction of this railway had also been given to the same Belgian group. They had completed the earthworks for the first 80 kilometres from

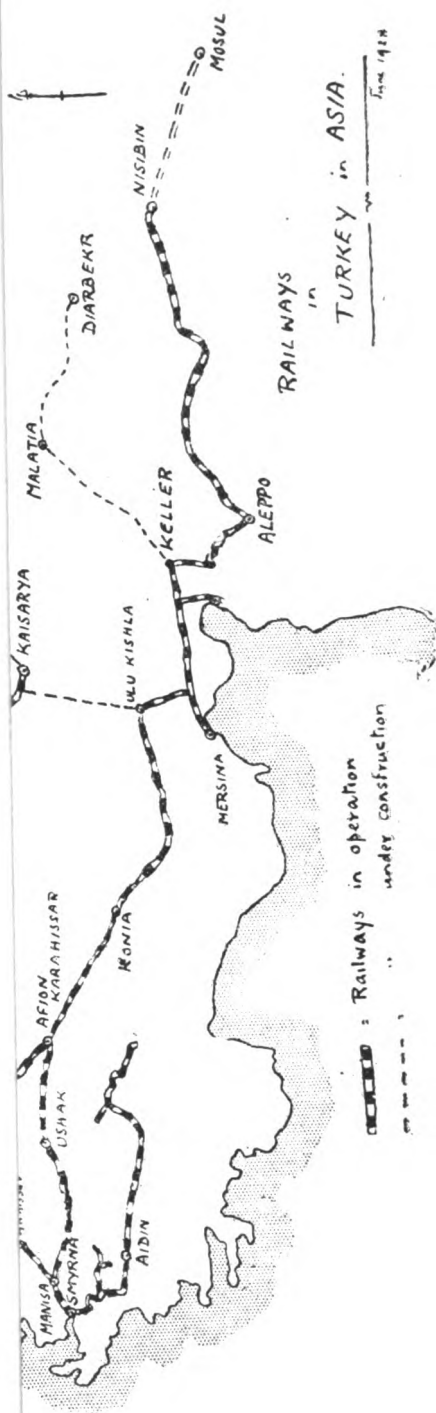
Kaisarya before their contract was annulled. The Turkish Government hoped to complete this section of the railway themselves by 1st May, 1928. The Government is still considering the question of re-allotting contracts for the remainder of this railway, and hopes that the whole line from Samsun to Kaisarya will be open to traffic during 1930.

(c) *Kaisarya-Ulu Kishla Railway*.—The contract for this railway was also originally given to the Belgian group, but was annulled before any work had been done. The German group of Julius Berger were then given the contract, but no information has been received up-to-date as to the progress, if any, that they may have made.

(d) *Sivas-Erzincan Railway*.—In the previous article it was stated that the Turkish Government were negotiating with a Swiss group for the construction of this line. It is now reported that the Ministry of Public Works will spend the present year considering this proposition and a possible extension to join up with the Erzincan-Sari Kamish railway.

(e) *Keller-Malatia-Diarbekr Railway*.—This railway is being constructed by a Swedish group. Considerable progress has been made with regard to the earthworks, &c. Work was commenced from Keller, which will be the junction between the new line and the Baghdad Railway. The group is reported to be handicapped by lack of capital. The construction and ballasting of the permanent way has been parcelled out by the group to local Turkish contractors. Though steady progress is being made, work has been slowed up owing to the difficulties the contractors have met with in maintaining an adequate supply of labour during the winter months.

(f) *Angora-Eregli Railway*.—This railway is also being constructed by the Swedish Group. As was mentioned in the preceding article, it was first intended that the railway should be metre gauge. The Government then decided that the railway should be of the same gauge as the other railways in the country. After construction had been commenced the Turkish Government decided to alter the trace of the railway so as to run direct from Kaledjik to Cherkess, instead of passing through Changri and Karadjaviren. This alteration will shorten the length of the railway by some 50 kilometres; it is also believed that the new trace will facilitate construction. The Swedish group have been promised financial



compensation for the work already done and an extension by 6 months of the time limit for the completion of the railway. The Swedish Group are reported to have ordered 200 kilometres of railway line for this railway and for the Keller-Malatia-Diarbekr Railway.

(g) *Kutaya-Tavshanli-Balikesri Railway*.—The construction of this railway is being undertaken by the German Group of Julius Berger. Considerable progress is reported to have been made and the first rail was laid during April this year ; the Group hope that the railway will be open to traffic as far as Tavshanli by the end of July, 1928.

FACTORIES.

Yakshi Han Ordnance Factory.

It is reported that progress is being made in the completion of the new Turkish Ordnance Factory at Yakshi Han. A large quantity of machinery has recently been installed there, including a lathe for turning gun barrels of large calibre ; 4 Diesel engines of 500 horsepower each, are also being installed. A number of huts have been built near the factory for the occupation of German artificers and chemists ; the majority of these men are ex-employees of Messrs. Krupps. No information is available as to when this factory will be in production.

2. *Kaisarya Aircraft Factory.*

Some years ago the Turkish Government arranged with the German firm of Junkers for the construction of an aircraft factory at Kaisarya. It was originally intended that this factory should serve for the construction of aircraft. It was recently reported that only erection and repairs could be undertaken there ; it is now stated that the Turkish Government have been much annoyed at the slow progress which has been made in the development of this factory and that conferences have been held between the Chief of the Turkish Air Force and the German Director.

PORTS.

1. *Eregli.*

The Swedish Group who as mentioned above are undertaking railway construction in Turkey also contracted to build a port at Eregli on the Black Sea. The Group soon discovered that the

Turkish authorities had no records of tides or climatic conditions, and therefore decided before any work could be commenced that a complete record of the conditions obtaining in the port for a whole year should be made. The time limit set by the Turkish Government for the completion of the construction of the port has been extended by one year.

2. *Mersina.*

The Swedish Group also undertook to construct a jetty at Mersina as part of the contract for the Keller-Diarbekr Railway. In October, 1927, they contracted in addition to construct a port there. The Group are at present in process of constructing the jetty on the lines originally decided upon, whilst they are at the same time collecting the necessary data to enable them to draw up a plan for the new harbour works. The jetty will be 150 metres long and 167 metres wide; it will be equipped with two electric cranes with a lifting capacity of 3 to 25 tons. The latter crane is to serve for discharging railway wagons, &c., for the Keller-Diarbekr Railway. Owing to the shallowness of the water at the jetty, ships will still anchor in the open roadstead, goods being conveyed by lighter from the ships.

No information is available as to the scope of the proposed harbour works. Owing to the shallowness of the water at Mersina, ships normally anchor about $1\frac{1}{2}$ kilometres from the shore.

CORRESPONDENCE.

LONDON'S MILITARY LIBRARIES.

DEAR SIR,

It may be of some assistance to those who are fortunate enough to have prospects of furlough to the United Kingdom in the near future, if the writer gives some account of what he has been able to ascertain—at first—or at second-hand—regarding the sources of professional information in London.

Officers wishing to study the “military art” whilst on Home leave may perhaps be roughly classified as follows:—

- (a) Those preparing themselves for the Staff College Entrance or some other professional examination;
- (b) Those anxious to keep abreast of general military knowledge by (let it be whispered) not too arduous military reading such as may serve to fill in wet summer afternoons or long winter evenings; and
- (c) Those who have an interest, whether mild or intense, in military history or biography. In the latter class the would-be regimental historian deserves not only to be remembered but to be encouraged and assisted.

All of these classes have certain essential interests, and therefore sources of information, in common. None of them can possibly do without the library of the Royal United Service Institution in Whitehall, for example; and a brief account of this, and of the War Office Library, deserve pride of place.

To make use of the R. U. S. I. library it is (ordinarily) necessary to join the Institution. This, to any serving officer, presents no difficulty whatever; and nowadays the subscription (25s. per annum) enables the member not only to use the library but also to borrow books therefrom to read by his own fireside. All but the scarcer books are readily lent: the only additional expense is their carriage to and from Whitehall. The library has over 30,000 volumes, mainly on naval, military and air-force subjects; though records, publications and works on travel are well represented. It also has a large collection of maps, and a small selection of naval and military manuscripts. I have spent many hours within its hospitable doors, and

with all humility would testify to its utility and also to the ready and courteous aid which is afforded to members by the librarian and the library staff.

The War Office Library also keeps open house to all serving officers—"after a slight formality at the box office," namely, the filling-in of (to Indian Army Officers) a fairly easy Army Form, under the stern eyes of policeman and messenger—and to a large extent the contents of its shelves overlap in their scope those of the R. U. S. I. On descending to the dungeons, 120,000 volumes and two extremely helpful Civil Servants will be found. Alas! Mr. Hudkeston is no longer there, but Mr. Baldry (now Librarian) and Mr. White (Assistant Librarian) fill his place with ability. This library is remarkable, firstly, for its exhaustive collection of military works on the armies of England, and in English; and secondly, for its wealth of printed sources regarding the military affairs, new or old, of the whole world. In addition, there are over 6,000 volumes and pamphlets dealing with the Great War.

Both the above-mentioned libraries are especially rich in military works of reference—old and new Army Lists, parliamentary papers, and bound volumes of military periodicals. In both, also, will be found card-indexes to assist, more particularly, the searcher after writings of present-day value.

The service clubs have, on the whole, fairly good libraries. A detailed discussion of these is unnecessary here, since the use of any particular club's library is confined to the members of that club, and every officer who has any interest in the matter may be presumed to have already made his own inquiries. One point, however, may be emphasised—the libraries of many London clubs have suffered (as some indeed still suffer) from prolonged neglect on the part of the Committee or its delegates. Hardly any club—and I think I am right in saying *no* service club—has a whole-time professional librarian. The Athenaeum has one, of course; and those of us who are, or become, Field Marshals will no doubt be enabled by Rule II to make use of his valuable services. But of the average club the old story may be told—of the professor of Heidelberg, with a pre-war international reputation who came at last to London to consummate a life time of research. Two days were enough for the British Museum: half-a-day for the Athenaeum, both its members and its library:

and on the afternoon of the third day the professor moved rapidly down Pall Mall shuffling a pack of the most glittering letters of introduction. With them he dazzled the hall-porter of an eminent club which shall be nameless ; and, achieving the Upper Smoking Room, commanded the presence of the Librarian in dry but intelligible accents. A hiatus, a pause, a lacuna, a positive *delay* ensued. Again he politely but authoritatively requested that the Librarian should appear. At length a callow bloody youth burst through the double doors, obviously propelled by two pimply pages, and nervously polishing a butcher's steel on a long baize apron. Herr X glared, more confounded than illumined. The quaking lad was led up to the savant. "Who are you?" "Ppp-please, Sir, I looks after them books." "Why.....what....?" "The Secr'try's orders is, Sir, that the second meat-boy does." But this is a digression.

For all subjects relating to the Great War, the library of the Imperial War Museum (178 Queen's Gate) is a mine of information containing some 35,000 volumes. Free access is accorded to officers of the Army and Navy.

A little-known library is that of the Corps of Royal Engineers, which is housed in the Horse Guards buildings. It dates from 1847, and embraces all the subjects which might be expected. All Sappers who subscribe can use and borrow from it, and others may by permission of the Council. The Gunner's library—that of the Royal Artillery Institution at Woolwich—is of about the same size (15,000 volumes) as the Sappers', and its rules also are much the same. The library of the Royal Military Academy is larger by some 3,000 volumes, and is particularly strong in military history and biography. Perhaps its most interesting feature is the private library of the ill-fated Prince Imperial, which he gave on leaving the Shop. Though the library exists primarily for cadets, serious students are usually permitted to use it on application.

This exhausts the list of purely military libraries of importance. As a matter of interest it may be mentioned that some rare old English military books are to be found not only in the British Museum, but also in the library of Sion College (the ecclesiastical establishment on Queen Victoria Embankment: the Archbishop of Canterbury's library at Lambeth Palace: and the Guildhall library.

It is hoped that this very brief sketch will, in spite of its limitations, serve as a small indication of the possibilities of brighter military reading afforded by brighter London—the most wonderful city in the world.

Yours faithfully,

HYDERABAD.

REVIEWS.

LEAGUE OF NATIONS ARMAMENTS YEAR-BOOK (1928.).

(*Publishers League of Nations, Geneva.*)

This most useful compilation—the fourth of its kind, fully justifies the decision of the Council of the League of Nations, in 1923, to have for easy reference a comparative statement of the armed strength of the various nations of the world. It is, moreover, an advance on the previous editions in that greater detail is published—doubtless, with the object of providing experts, who desire to study details of the “organization and mechanism” of the military machines of the different countries, with official statistics.

Monographs on 58 countries, both members and non-members of the League, are included ; it can accordingly be said with confidence that no nation has been omitted whose power to carry out aggressive designs on another nation is of importance to the League and therefore to the rest of the world. However in spite of this, we should have liked to have seen details with regard to Persia (a member of the League) and Afghanistan, and it is to be hoped that subsequent editions will incorporate such information.

Graphs and recapitulatory tables (which it is intended to develop further in subsequent editions) enable readers to obtain a rapid survey of certain aspects of the military situation in different countries. For those who require more detailed information, each country (where such information applies) is dealt with under three parts :—

1st Part.—Information with regard to the Army and Navy.

A special section is devoted to aviation in the case of countries in which it is organized as an independent arm.

2nd Part.—Budget expenditure allotted to National Defence.

3rd Part.—Production and exchange of goods of importance for National Defence.

As is evident from the bibliography, care has been taken to bring this work up to date from the most recent available documents. There are naturally (and this is inherent in all publications of this nature) a number of minor errors which have been caused by changes in organization, etc., subsequent to the publication of documents on which information is based. But these are not, so far as can be gathered from a perusal of information regarding States within the

British Empire, of such a nature as to detract from the general value of the book. Consequently, to students of the disarmament question and to those whose interest may lie in determining the influence of any foreign power on British strategy, this Armaments Year-Book will prove of great value.

THE EVENTS, STRATEGY, AND TACTICS OF THE PALESTINE CAMPAIGN WITH ILLUSTRATIONS OF THE PRINCIPLES OF WAR.

BY A. KEARSEY, D.S.O., O.B.E., P.S.C.,
late Lt.-Colonel, General Staff.

(Published by Messrs. Hugh Rees Ltd., 1928.) 3 shillings net.

This is a small book, which should be of assistance to candidates for examinations, who have already made a careful study of the campaign; it should be of distinct use in refreshing the memory shortly before sitting for an examination.

There are two chapters with two appendices. Chapter 1 is purely a diary of events from 30th October 1914 to the Armistice, the first three years of the war being dealt with very briefly but 1917 and 1918 are shown in much greater detail, in fact in places it becomes a daily diary.

Chapter 2 deals with the principles of war, and many good examples are produced to illustrate them. It is a pity, however, that these examples have not been given in chronological order, instead of usually starting with those taken from the last offensive and then harking back to the time of Gaza or Beersheba.

Appendix No. 1 contains 5 maps showing the situation on various dates, but they are too small to be of any practical use.

Appendix 2 consists of 21 questions which should be useful for intending examination candidates.

MOSQUITO REDUCTION AND MALARIAL PREVENTION.

BY J. A. CRAWFORD & B. S. CHALAM.

(*The Oxford University Press, Bombay, 1926.*) Rs. 3.

The modest dimensions of this little work must not be taken as a measure of its usefulness.

Malaria is a disease which, from the far-reaching invalidity it causes, is worthy of the most serious study.

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This treatise will enable the layman readily to grasp the practical politics of prevention; at the same time the busy medical officer will find in it a clear practical summary of the identification of mosquitoes, their habitat (a most important consideration), and many other items of scientific interest.

The book is easy to read, well illustrated, clearly printed on good paper, and inexpensive to buy. In addition, it possesses the "imprimatur" of an undoubted authority (S. R. Christophers) whose name alone is sufficient guarantee of its excellence.

An admirable small manual which we heartily commend to the notice of all who are concerned with or interested in the prevention of malaria.



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Forest maps are obtainable only from the Officer-in-Charge, Forest Map Office, Dehra Dun.

Geological maps are obtainable from the Director, Geological Survey of India, Calcutta.

The Survey of India publish maps for the greater part of SOUTHERN ASIA between the meridians of 44° and 124° East of Greenwich and between parallels 4° and 44° north latitude.

2. Surveys executed after 1905 are classed as "MODERN," those PRIOR to that date are classed as "OLD."

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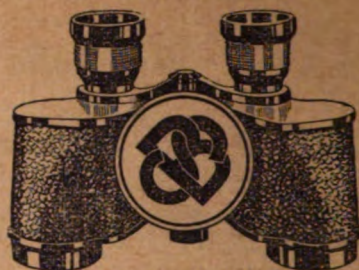
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